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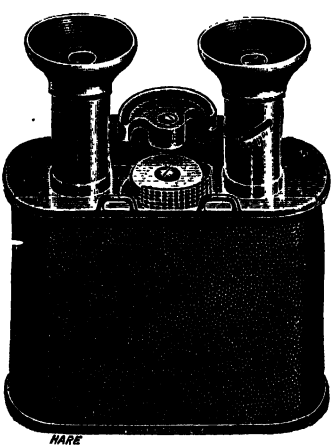
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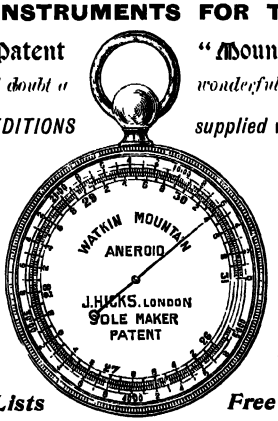
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INTRODUCTION.

In this little book I endeavour to give in a small compass information which some may desire to have at home, and that others will wish for on the spot. It deals both with past and present. The historical portion is followed by the topographical; and, at the end, in the Appendix, there are lists of Guides, the 'Tarifs' of Excursions, and Tables of the Peaks and Passes (arranged alphabetically), etc. Whilst aiming at conciseness, I have tried to avoid the extreme condensation which, in some Guide-books, produces a feeling of bewilderment. See foot-notes to pp. 99, 146 for **abbreviations.**

The Illustrations, for the most part, are subjects which have not been engraved before, and the authorities for them have all been obtained expressly for this work. I am indebted to the Paris, Lyons and Mediterranean Railway Company for the basis of the Plan of Chamonix; to MM. the Chief Guides of Chamonix, Courmayeur and St. Gervais for assistance in the preparation of the Lists of Guides; to the late Mr. C. D. Cunningham and Mr. J. Eccles for useful information; and to Messrs. W. E. Davidson, F. C. Grove, Horace Walker and J. H. Wicks for tracing their respective routes up the Aiguille du Dru, the Aiguille de Bionnassay, Mont Blanc by the Brenva Glacier, and the Pic Sans Nom. The present (the Ninth) Edition is brought up to date.

The following hints may be of some service to those who visit Chamonix and Mont Blanc for the first time.

Expenses.—The cost of living is moderate throughout the Mont Blanc district in general, and in not a few of the Hotels *pensionnaires* are taken on very favourable terms. More will be got for money by settling down at a few places for a length of time than by constantly moving from one hotel to another; and there are several spots which are excellent centres, besides Chamonix.

Money.—Take some Napoleons (20-franc pieces), a small quantity of French silver for wayside expenses, and the rest in sovereigns and £5 Bank of England notes. The notes can be changed at Geneva, Chamonix, Courmayeur and Martigny. Sovereigns go everywhere, except at the very smallest places. English silver is not understood, and will not pass. Beware of small Italian silver coins, which are supposed to be withdrawn from circulation.

Clothing.—Woollen goods and flannels are most suitable. It answers better to have several changes of thin garments than to be provided with a few thick ones. **Mountain-boots** should be taken out, and got into use before starting. The *nailing* is best done on the spot. J. Ducrey, of the Rue Nationale, Chamonix, understands how to nail boots properly. The **Puttee** (which is of Indian origin) is superseding other forms of Gaiters. Puttees are comfortable and practical, and are now manufactured in England, but they can be

obtained at a lower cost in Switzerland than they can in our own country.

Rope.—If excursions are contemplated on which it will be desirable to use rope, it will be best to take rope out. There is none in the market equal to the Manilla rope which is specially manufactured for the use of mountaineers by Mr. A. Beale (successor to Mr. J. Buckingham), 194 Shaftesbury Avenue, London, W.C., which *ought* to be identified (amongst other ways) by a red thread woven among the strands. There are several spurious imitations abroad, in which this red thread is fraudulently copied. Beware of them.

Ice-axes of good quality and at moderate prices can be obtained either in Chamonix, or at the village of les Bossons, from Simond Bros., the makers. See p. 113.

Soap.—There is a great opening for soap in Alpine regions, and at the present time it pays to carry a cake.

Baggage.—The minimum of baggage sometimes means the maximum of comfort. Anyone who has no more than he himself can transport conveniently, can travel more quickly, pleasantly, and economically than those who exceed that limit. On the other hand, innkeepers look with suspicion upon travellers with little or no baggage, and are apt to thrust them into the very worst rooms.

Luggage can be conveniently sent in advance to Chamonix, at through rates, per Messrs. Stockwell & Co., Ltd., 18 Finsbury Street, London, E.C., who have at my recommendation made the necessary arrangements. For Rates see page 8 of the Advertisements.

Passports should be carried. Though a prolonged tour may be made in France, Switzerland, and Italy without finding any use for them, occasions sometimes arise when they are desirable or necessary, and it is best to be on the safe side.

Language.—French is the language for Chamonix and the Range of Mont Blanc. It is recognized at Chamonix that there is such a language as English, and not a few Chamoniards speak English, but their natural modesty sometimes restrains them from exercising their accomplishments. In Appendix F, some of the Guides who speak English are indicated. Almost as much French as Italian is spoken at Courmayeur.

Custom-houses.—In going to Chamonix *viâ* Annemasse one avoids the examination which would occur if one went *viâ* Geneva. In returning to Paris direct from Chamonix *viâ* Annemasse, baggage in the traveller's possession is examined at Bellegarde, and registered luggage is examined at Paris. When proceeding from Chamonix into Switzerland by the Tête Noire or *viâ* Salvan, a douanier is encountered at Châtelard. Travellers by the Col de Balme, by the Col du Bonhomme and de la Seigne, or by the high snow passes, escape visitation.

Maps.—The folding Map of the Chain of Mont Blanc, at the end of the volume, in conjunction with the plans in the text, will be

found sufficient for most purposes. Those who desire greater detail can turn to—

1. The map by Capt. Mieulet, scale $\frac{1}{40000}$. This gives the central portion of the Range, and, as far as it goes, includes the Italian as well as the French side, but it does not include the two ends of the Range. It is clearly executed, upon the whole accurate, and is one of the most generally useful of the maps that are mentioned.[1]

2. Map of the Etat-Major français, scale $\frac{1}{80000}$, sheets 160 bis, and 160 ter. These sheets embrace the route from Annemasse to Chamonix, and give the French side of the southern end of the Range of Mont Blanc, which is not included in Mieulet's map. They do not, however, give any part of the Swiss or Italian side. The sheets are not well executed, and the copies in circulation are badly printed.

3. The Swiss end of the Range is given in Sheet XXII of the Carte Dufour scale $\frac{1}{100000}$. This sheet is beautifully executed, but it is now almost superseded by

4. The Topographische Atlas der Schweiz, scale $\frac{1}{50000}$, published under the superintendence of Col. Siegfried. A map (made up from several of the sheets of this atlas) has been issued entitled Martigny—Gd. St. Bernard—Combin, which embraces all the Swiss end of the Range. Price five francs.

5. For the Italian side of the Range of Mont Blanc, consult Sheets 27, 28 of the Carta Italia, scale $\frac{1}{100000}$. This map is badly executed, and many of the names and heights can scarcely be made out.

6. *La Chaîne du Mont-Blanc.* Carte au 1/50,000, dressée sur l'ordre de Albert Barbey par X. Imfeld, d'après les relevés, les mensurations, et la nomenclature de Louis Kurz, et d'après les documents existans.—This Map. published in 1896, gives the whole of the Range. It is very clearly executed, and well printed. Price ten francs, unmounted.

A larger map than any of the above, of the entire Chain (scale $\frac{1}{20000}$), is being produced by MM. Joseph and Henri Vallot of Paris; but at present no date can be fixed for publication.

All of the above Maps can be obtained of Mons. H. Kündig, 11 Corraterie, Geneva.

Upon engaging Guides.—Though no recommendations are given in this book, I cannot refrain from referring to two of my oldest friends at Chamonix, the brothers Frédéric and Michel Payot. M. Frédéric Payot earned my gratitude in 1865, by volunteering his assistance at a time when I was placed in a great difficulty. Since then he has risen to be Guide Chef thrice, and has ascended Mont Blanc more than a hundred times. His brother Michel shewed his capacity at an early age, and has, I believe, made more 'first ascents' in the Range of Mont Blanc than any other living Chamoniard (see pp. 53, 148 and 156 and the Supplementary sheet issued with the Fourth Edition). In consequence of their having passed the age limit, the names of these two excellent guides no longer appear on the Register.

There is good material amongst the Guides of Chamonix, but it goes without saying that in a body numbering more than 300, which includes the greater part of the able-bodied males between the ages of 24 and 60, there are men of various capacities and different characters. The recommendations that I should make in regard to the choice of guides at Chamonix and Courmayeur are just those which

[1] The full title of this map is *Massif du Mont Blanc, extrait des minutes de la carte de France, levé par Mr. Mieulet Capne. d'Etat Major, publié par ordre de S. E. le Mal. Randon, Ministre de la Guerre.* Paris. 1865.

I would make in regard to guides at any other places. 1. Before engaging a Guide, make enquiry of his antecedents from those who know. 2. Avoid men notorious for accidents. 3. For difficult or long excursions give preference to men of middle age rather than to the youngest or oldest.

I do not attempt to decide whether a traveller should employ guides. Some persons are competent to carry out by themselves all the excursions that are mentioned. A larger number, however, are not equal to this. Inasmuch as I am unacquainted with the various capacities of my readers, I am unable to say whether they need not, or should employ guides. Everyone must decide that for himself.[1]

The Railway to Chamonix.—The line from Cluses to le Fayet (for St. Gervais) was opened on June 15, 1898. The station at le Fayet is close to the Bridge of Bon Nant, at the entrance to the Baths of St. Gervais. Its position is shewn on the Plan upon p. 142. *Passengers change carriages at le Fayet* for **the Electric Railway** that goes thence to Chamonix, which was opened in July, 1901. For the course of this line, see the Plan at the end of the Volume. A Table of Fares is given on p. 29 of the Advertisements. The cost of this Electric line is said to have amounted to £420,000, or more than 450,000 francs per kilomètre.

Time.—Paris time is the legal time at Chamonix and in the French portions of the Chain of Mont Blanc, and it is 9 min. 21 sec. in advance of Greenwich time. In Switzerland and Italy 'Central Europe' time is kept, which is 50 min. 39 sec. in advance of Paris time, or one hour in advance of Greenwich time. See *L'Annuaire des Longitudes*, Paris, 1898. When crossing and re-crossing the frontier, it is well to keep these facts in mind.

The **Société suisse des Hôteliers** published at Basle, in 1896, a small book containing the following remarks, which shew the views of Swiss Hotelkeepers upon several matters of general interest.[2]

Ordering Rooms in advance.—It is said that "A rather remarkable confusion of ideas prevails among the travelling public as to this frequently occurring question, which, in the height of the season especially, causes numerous unpleasant discussions."

"In a great measure this is owing to the advice contained in travellers' guide-books, advice, which, we are willing to admit, is given in good faith, and with the intention of guarding the interest both of traveller and of landlord. This advice is to the effect, 'that rooms should be ordered in advance especially when one is due to arrive at a late hour.' But owing to the fact that in the respective notices in guide-books, neither the question of *right* nor the *commercial* aspect of such ordering of apartments has been in the least discussed, there has arisen among a great many travellers the one-sided opinion, that ordering beforehand will, to a certain extent, ensure to the guest a claim, a power of disposal, without binding him to any reciprocal obligation."

[1] It is presupposed that my readers are acquainted with the technical terms which are employed. If they should not be, I refer them to *Scrambles amongst the Alps*.

[2] This book, entitled *The Hotels of Switzerland*, is issued in English, French and German Editions. Price 50 centimes. It gives a considerable amount of information, and discusses a variety of topics,—from the reasonableness of wanting hot dishes at night to bringing Monkeys into Hotels. It is said that "Rooms are often considerably soiled and damaged by such uncouth inhabitants."

Let us now examine the following considerations:

1. Which traveller has the greater claim to accommodation,
 (a) the one who arrives early at the hotel, or (b) the one who by letter, by telegram, or only by telephone makes known his intention to put up there, and either arrives late at night or does not even arrive at all; whereas the former by his timely presence appears to be the better customer.
2. An agreement, a contract in which claims and counter-claims are stipulated, must be concluded by at least *two* parties.
 A *one-sided* order from the traveller does not give him the slightest *legal claim* to consideration, for in such a case there is lacking:
 (a) a declaration on the part of the second party (the landlord) that he *can* and *will* accept the order; (b) *the traveller's guarantee* that he will fulfil the obligation *entered into* by giving the order.

With the increase in the number of travellers there is also an increase in the number of those *who believe they may bind the hotel-keeper by ordering apartments in advance, without being themselves in any way bound by such an order.*

Hence the efficiency of such orders is diminishing daily, and the landlord is all the less to be blamed if he first attends to the guests that have actually arrived, and refuses to comply with any orders from persons unknown to him, unless recommended by trustworthy parties.

A prepaid reply seems, in a certain measure, to increase the probability of having an order for rooms attended to; it may, according to the more or less definite answer of the landlord, bring about, if not a legal, yet a moral obligation on his part. Still even then it cannot be said to be binding, as an *effectual guarantee is wanting on the part of the traveller* for the fulfilment of the obligation entered into, which alone can give the order the character of an agreement."

Ordering rooms for arrivals early in the Morning.

"If the room has been reserved for a guest overnight in consequence of his order, he should only be charged for it *once; provided* he occupies it only during the day, and places it, by early notice, at the disposal of the landlord for the same evening.

"Should the latter be prevented from disposing of it for the ensuing night, the traveller must, especially during the season or when there is a great rush of visitors, be willing to pay for the room for *two* nights, even though he may not have occupied the room for fully 24 hours."

Landlord's responsibility. Depositing Objects of Value.

"The traveller will do well, in order to avoid losses and disagreeable law-suits, to follow the advice of guide-books and the request of landlords, *to hand over all valuables to the landlord personally.*"

Some hotels at Chamonix are open throughout the year, and attempts are being made to establish 'a winter season.' Snow there is seldom so much as a mètre in depth in winter, though it is not unfrequently 3 to 4 mètres deep at Argentière and le Tour. So little snow fell in 1893-4 that wheeled vehicles were used all through the winter instead of sledges. But **the Season** at Chamonix may be said to begin with June and to end in September, though the weather is *sometimes* fit for the majority of the excursions that can be made as early as the middle of May and for a little while into October. In some years, there are a number of visitors by the middle of May, the Tête Noire

is open for carriages, and several of the lesser ascents are made. But, usually, tourists thin off at the beginning of October, and by the middle of the month only *habitués* and stragglers are left. Chefs, Portiers and Garçons are seen in unaccustomed places, and even invade the sacred benches 'reserved for travellers'—it is the 'end of the Season.'

EDWARD WHYMPER.

April, 1904.

NOTES TO THE NINTH EDITION.

The first ascent of Mont Blanc in 1903 was made upon June 26.

House of Jacques Balmat at les Pélerins (see p. 113).—It is rumoured that this house is going to be pulled down and reconstructed.

Alterations in the List of Guides.—The names of twenty-one Guides are removed this year from the List of Guides given in Appendix F (principally in consequence of their having passed the age limit), and the names of eight fresh ones are added.

Disappearance of a Lady.—In the month of August, 1903, a German lady started from the Hotel du Châlet des Praz to make an excursion somewhere. She did not return; and, although long search has been made, no trace of her has been discovered.

Skis are taking root at Chamonix. The opinion entertained of them is favourable. It is said that a descent from the Col de Balme to the village of le Tour has been effected in 10 minutes. See *l'Annuaire du Club Alpin Français*, 1903, and *Revue Alpine*, Sept. 1, 1903, for an article entitled "de Chamonix à Zermatt en skis."

"Club des Sports Alpins."—An association under this title has been formed at Chamonix for the encouragement in the Valley of Alpine sports (ski, sledging, skating, etc.). The annual subscription is 15 francs, or for life 200 frs. Dr. Payot is President; Mons. E. Simond (Mayor of Chamonix) and Mons. E. Simond (Notary) are Vice-Presidents; and Mons. Corajod is Secretary and Treasurer. Foreigners can become Members.

Railway from Chamonix to Martigny (Valley of the Rhone).—The construction of the Electric Railway between these two places is proceeding actively, but no date has yet been fixed for the opening of the Line. It is to have a long tunnel under the Col des Montets, will pass by Salvan, and descend into the Valley of the Rhone at Vernayaz. Stations are already built at les Praz, les Tines, and Argentière. The works on the steepest part of it are well seen by travellers on the railway from Martigny to St. Maurice when passing between Vernayaz and Evionnaz.

An Electric Railway up Mont Blanc.—An electric railway is projected to go to the Summit of Mont Blanc. The first section is designed to start from the Railway-Station at le Fayet, and will mount, it is said, past St. Gervais-les-Bains to the Col de Voza and the Pavillon Bellevue, and will then go *viâ* Mont Lachat and the Tête Rousse to the Summit of the Aiguille du Gouter!

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CHAMONIX AND MONT BLANC



THE ENGLISHMEN'S STONE (SEE CHAPTER X.)

CHAPTER I.

ON THE EARLY HISTORY OF CHAMONIX AND MONT BLANC.

FOUNDATION OF LE PRIEURÉ—CHAMONIARDS BOUGHT AND SOLD—HERESY, SORCERY AND CAPITAL PUNISHMENTS—SHARING THE PROCEEDS—PÉRONETTE CHARGED WITH EATING CHILDREN AT THE SYNAGOGUE—THE PRIORY CHANGES HANDS, AND THE NATIVES BEHAVE VIOLENTLY—CHAMONIX BECOMES ENFRANCHISED, AND THE COMMUNE TAKES POSSESSION—EARLY VISITORS TO CHAMONIX—POCOCKE AND WINDHAM—THE JOURNEY OF PETER MARTEL—THE FIRST INTRODUCTION OF MONT BLANC TO THE WORLD.

THE History of Mont Blanc, though intertwined with that of Chamonix, is not identical with that of the Valley and Village. The name of the Mountain has only been traced back to 1742, and its history commences somewhat later. The Valley, on the other hand, has a history dating from the time of the Norman Conquest. The earliest and almost the only piece of evidence that this region was populated in still more remote times is afforded by an inscribed stone, discovered in 1852, upon the St. Gervais side of the Col de la Forclaz,[1] at a spot called le Larioz; which sets forth that it was a sort of boundary stone placed there in the time of Vespasian.[2] From that period until 1091 nothing is known about the Village or Valley. Then Count Aymon of Geneva bestowed on the Benedictine Abbey of St. Michel de la Cluse (near Turin) the whole of what is now called the *Valley of Chamonix*, extending from the Col de Balme to les Houches, and a Priory was established.[3]

1 Sometimes called the Col de la Forclaz de Prarion, to distinguish it from the other Col de la Forclaz between the Tête Noire and Martigny.

2 Figures of this stone are given in Ch. Durier's *Mont Blanc*, Paris, 1877, and in Perrin's *Histoire*, Paris, 1887. A Roman way from Geneva is said to have crossed the Arve a little above Servoz into the Val Montjoie, by the Col de la Forclaz; and probably led by the Col du Bonhomme and Col de la Seigne into the Valley of Aosta.

3 According to M. Charles Durier the text of the Charter or Act of Donation was first *printed* at Lyons in 1660. The original document was discovered by Capt. Markham Sherwill in 1831, at Chamonix. It passed into the possession of M. Bonnefoy of Sallanches.

It is not clear why this gift was bestowed on the Abbey. Count Aymon made over the valley, its lands and inhabitants. Whether he did this for the sake of a consideration, or out of pure benevolence, has yet to be discovered. The foundation of a Priory was a certain indication that there was a population, and, for a mountainous region, it appears that it was not an inconsiderable one. Until recently, through want of research, scarcely anything has been known about the life of these people during the middle ages. Writers upon Chamonix have commonly treated the period as a blank, and have spoken as if the history of Chamonix commenced in the early part of the 18th century. The labours, however, of M. André Perrin have put the matter in an entirely different light. His *History of the Valley and Priory*,[1] based upon the documents[2] collected by M. A. Bonnefoy of Sallanches, gives many interesting details, from which, for the first time, one is enabled to form some idea of the life of the people,—how they were treated, and what they did.

For four centuries the Priors had things their own way, and enjoyed all but absolute jurisdiction; and, under their rule, the inhabitants of the valley cannot have led a very enviable existence, though the treatment they received, so far as we know, was not worse than that which was experienced by their contemporaries in the most civilised parts of the world. There were a certain number of free men,[3] but the greater part were little better than slaves. They were sold or transferred with the land, like cattle; they could not marry without authorisation; and they were occasionally burnt at the stake, for their future benefit, and to the immediate profit of the Priory.[4] Mons. Perrin quotes an instance, in 1283, when Jacques Bouteiller of Servoz *gave* as alms, for the repose of his soul, Nicholas of Chamonix and his descendants to Richard de Villette, then Prior; and says that two years later Léonarde, the widow of Jacques Bouteiller, *sold*

[1] *Histoire de la Vallée et du Prieuré de Chamonix du X^me^ au XVIII^e^ siècle*, par André Perrin, Président de la section de Chambéry du Club alpin français; 8vo, Paris, 1887.

[2] Names which are still family names at Chamonix are frequently found in these old documents. That of Charlet appears so early as 1396; Balmat in 1458; Bossonney in 1468; Comte and Carrier in 1483; and Cachat in 1520.

[3] "Les chartes relatives aux reconnaissances particlles et à la limitation des franchises par les prieurs nous montrent, qu'avant l'etablissement du prieuré, les hommes libres habitants le bourg de Chamonix formaient une communanté jouissant de nombreuses et importantes libertés. Des syndics nommés par eux étaient chargés de la représenter, de défendre ses droits en maintenant les bonnes et anciennes coutumes et de prendre toutes les mesures commandées par l'intérét commun. Ils surent garder intactes leurs libertés malgré les oppositions et les entraves des prieurs et de leurs divers agents. . . Les nombreuses transactions par lesquelles les prieurs reconnurent les usages et les droits du bourg de Chamonix ne furent que des reconnaissances formelles, de libertés immémoriales, accordées a la suite des troubles et des luttes nés des efforts qu'avaient faits les prieurs pour les réduire et les effacer. . . Ces reconnaissances servirent plus tard aux syndics pour sauvegarder les droits de la communanté comme si elles eussent été de véritables chartes de concession de franchises et non plus de confirmation." Perrin's *Histoire*, pp. 71-72.

[4] They were liable to fines for all sorts of offences. For example:—For selling sheep, pigs, calves, or suet without offering for the victualling of the Priory, 60 sous. For sales effected before the victualling was completed, 10 livres. For carrying a sword more than a foot and a half long, 60 sous and to have the weapon taken away. For carrying *bâtons ferrés* more than a foot and a half long, except when travelling, 10 livres and to have the weapon taken away. For refusal to obey the officers of the Prior when in charge of their duty, 25 livres.

Jean, Aimon, and Melioret, sons of Guillaume Bezer of the parish of Chamonix, to the same Richard de Villette for 50 *sous genevois*.

Heresy and sorcery were visited with death. The goods of those who were capitally punished ordinarily went to the Prior, but in the case of heresy they were divided between the Bishop of Geneva, the Prior, and the Inquisitor. M. Perrin refers to the trial of Guiga, widow of Millieret Balmat, *dit* Monard, of Chamonix, and Rolette, widow of Jean Duc of Vallorcine, who with two other women were accused of heresy in 1458, and gives the procedure which was followed. The syndics requested the Prior to assist them, and he nominated a judge, who was accepted. The accused were then taken into the church, and interrogated by Pierre Ginod, inquisitor, who, finding them apostate and impenitent, turned them over to the *chatelain*. He led them outside the barn of the Priory, before the judges and syndics, and demanded their condemnation as heretics. Jacques Bollet, *juge rapporteur*, read out the act of accusation, and then in the name of the other judges and syndics condemned them to death by fire, *dans un feu gros et terrible*, in order that this method of punishment might deter others who were inclined to imitate them. Pierre Ginod, the inquisitor, *sold his share of the proceeds to the Prior, Guillaume de la Ravoire, for fifteen florins.*

In the same year, Jean Corteys, *dit* Martin, was also accused of heresy; and in the following year Henriette, wife of Pierre Oncey, was charged with heresy and idolatry, and was burnt. Three years afterwards, eight were tried, in one batch. Claude Rup, a specialist in heresy for the dioceses of Lausanne, Geneva, and Sion, took them in hand, declared they were heretics, and delivered them over to the secular arm. The *chatelain* again led them into the courtyard of the Priory, 'where it was customary to deliver judgment,' and Jacques Bollet gave judgment against them; and, as they refused to amend their ways, he declared that the whole were to be burnt and all their goods were to be confiscated. Péronette, widow of Michel des Ouches, who, besides heresy, was said to have been guilty of various other crimes, including 'eating children at the synagogue,' was selected for special punishment. She was tied to a post of wood, '*haute et visible*,' sitting on a red-hot, burning iron for the twentieth part of an hour, before the light was applied to the stack, above which she was placed to be burnt; and Jean Grelan, who it is said had 'trampled on the body of Christ and paid hommage to the Devil,' etc., was condemned to be led to the place where he had committed these crimes, or to the nearest place of justice, and after having had his foot cut off was to be brought back, dead or alive, tied to a post and burnt along with his foot.

Centuries of oppression accustomed Chamoniards to this sort of treatment. They were born under it, they endured it, and they accepted the situation, though every now and then there was an outbreak. Towards the end of the thirteenth century, in consequence of successive encroachments of the Priors, they rose in revolt, and carried off the cattle of Richard de Villette,[1] and he only made peace by recognising and confirming their rights in writing. His nine successors

[1] Prior from 1255 to 1296.

ruled on an average 25 years apiece, more or less obnoxiously, and then there came a change.

By a Papal Bull of February 27, 1519, the Priory of Chamonix passed into the hands of the Chapter of the Collegiate Church of St. Jacques at Sallanches, and the natives, for a time, seem to have anticipated that some benefits would accrue to them from the transfer.[1] The Chapter pledged itself to appoint a resident Canon, and to respect the privileges of the inhabitants; but the Chamoniards do not appear to have been satisfied with their treatment, and presently resisted the collection of taxes. At this period they became somewhat turbulent. Two officers who were sent successively to Chamonix were so maltreated that they considered themselves fortunate to escape with their lives. "I have not been able to discover," says M. Perrin, "that any consequences followed." Orders were, however, given to arrest the mutineers, and a certain Chissé de Boutiller was despatched with a numerous train to carry them out. But when he arrived before the Church he was assailed with showers of stones, and, wounded, beat a hasty retreat. Matters continuing like this, the Chamoniards incurred excommunication; but they begged themselves off for three months, in order 'to take the sacrament at Easter,' and then went on as before. The Bailly of Faucigny came in 1535 to publish a proclamation ordering the payment of the obnoxious *dîmes*, and the syndics and the inhabitants behaved violently, tore up the proclamation, and drove the Bailly and his men into the Priory. For this outrage several persons were arrested, and led away to prison at Chambery. The dispute still went on, and in 1537 the Seigneur Demarest de Menthon came to Chamonix, accompanied by fifty gentlemen, besides the officers of justice, to see what *he* could do; and he fared no better than the others, for he was hooted at all along the road, and was besieged in the Priory by 400 or 500 armed men, who threw stones and shot with arquebuses through the windows, and blocked every path to prevent the arrival of assistance, crying out that they should be killed, or burnt, or kept prisoners until they died of hunger. In the night one of them was let down through a window, and escaped by the mountains to Sallanches to give the alarm. The tocsin was sounded, and 500 or 600 men marched to relieve the Seigneur, who ultimately was allowed to depart in peace.

This was the commencement of a struggle in which the Chamoniards sought to get free from the exactions and imposts that they had inherited from feudal times, and the struggle continued for more than two centuries. In 1737 they began to aim at completely ridding themselves of their odious burdens by paying down a lump sum, and forty years were spent in haggling what the amount should be. In 1780, delegates from the Chapter met others at Chamonix appointed by the community to discuss terms. The Chapter wanted 150,000 livres, and at last came down to 75,000. Not until 1786 was a compromise effected; and then, by the payment of 58,000 livres the valley was delivered from its oppressions, Chamoniards became free

[1] The services had sometimes been neglected. In 1368, the syndics complained bitterly to the Abbé of St. Michel de la Cluse that the Church at Chamonix was not kept up as it ought to be, and spoke of the want of monks.

men,[1] and the Commune took possession of the lands of the Priory.[2] "'On the 30th of October, 1786, the rule of the Priory of Chamonix expired at the stroke of midnight and was buried the next morning,' having lasted 696 years. When the French Revolution came, the Chamoniards said, 'Ah! if we had only been able to look into the future, and had waited a few years, we should have been enfranchised without paying anything.'"[3]

The important period embraced by the years when the negotiations for enfranchisement were proceeding coincided with the time at which a stream of outsiders came to view the sights of Chamonix; and it seems probable that through contact and converse with those who enjoyed greater freedom than themselves the Chamoniards were fired with this craving for liberty. From 1741 onwards the stream flowed uninterruptedly and has constantly increased. But at a much earlier date *occasional* strangers came to inspect the Glaciers (or *Glacières*, as they were formerly termed). One of the earliest references to them that is in print will be found in *Les nouvelles œuvres de Monsieur le Pays*, a gentleman who wrote as follows, in a letter dated 'Chamony en Fossigny, le 16 May, 1669,' to a lady with whom he seems at one time to have been on good terms. Upbraiding her for her coolness, he says —

"In my despair at leaving you, I vowed that I would throw myself over the first convenient place. But, until now, though for fifteen days I have ascended and descended the most dangerous mountains in Savoy, and skirted the brinks of a thousand precipices, I have not thrown myself over. . . I must not deceive you. The pleasure of looking at your portrait in this frightful country has always kept me back when I proposed to execute my intention. . . Here, Madame, I see five mountains which are just like you. . . Five mountains, Madame, which are pure ice from top to bottom."[4]

Seventy-four years before the publication of Monsieur le Pays' letter, the name of Chamonix (Chamonis) made its appearance in the great Atlas of Mercator, and it was possibly somewhere about this time (1595) that the village began to be talked about in the outer world.[5] Anyhow, it is clear that it was by no means an unknown

[1] At one sweep, they got rid of "droits de fief, d'emphytéose, de directe, de lods, double lods et du tiers des ventes générales; les services, censes féodales, haut-siège, prémices des montagnes," etc.

[2] This appears to have been a *second* payment, for Bourrit, in his *Description des Glacieres* published in 1773, says that the Chapter of Sallanches formerly had the right to a third of the property of a man who died childless, but that the community had bought up that right for 30,000 livres. In his *Nouvelle Description des Glacieres*, published in 1785, he says that at that time the Curé of the Priory was called guardian (*administrateur*) "because, besides the care of souls, he looked after the property of the Chapter. This double occupation, which, in other countries, is liable to many consequences, has none in this valley, where the ecclesiastical rule is truly paternal. However, the community is at the point of being enfranchised," and he suggests, as a result, that "the clergy, when limited to their proper functions, will become more respected."

[3] The Priory has now disappeared. M. Perrin says that one of the Chapels belonging to it is incorporated in the existing Church, but that the buildings of the Priory were completely destroyed by fire on Dec. 3, 1758. He says further that the present Hotel d'Angleterre stands upon the site of two mills which belonged to the Priory.

[4] Monsieur le Pays apparently refers to the Glaciers of Taconnaz, Bossons, Argentière and Tour, and the Mer de Glace. I quote this passage from the interesting pamphlet by M. Théophile Dufour, to which reference will again be made presently.

[5] For the name is *not* in the Atlas by Mercator in 3 vols., the first volume of which was published at Duisburg in 1585.

place at the end of the 16th century; and this fact, in conjunction with the extracts that have been given from M. Perrin's *Histoire* (which, it should be said, convey a very inadequate idea of the sterling nature of his volume), is sufficient to shew that too much stress has been laid upon the 'discovery' of Chamonix by Pococke and Windham in 1741, though their visit, undoubtedly, had the effect of bringing it into greater prominence.

In the year 1740, "there was quite a little colony of English" at Geneva, composed in part of young men who had come there to finish their education. These young fellows appear to have been on good terms with the authorities. They sometimes invited them to private theatricals; and they were themselves invited upon other occasions to appear before the authorities, to account for too great sprightliness (*excès divers*).[1] Amongst them was William Windham, of Fellbrigg in Norfolk, who was about three-and-twenty years of age, handsome and tall, known subsequently in London as 'boxing Windham.' "I had," said he,

"long had a great Desire to make this Excursion, but the Difficulty of getting Company had made me defer it: Luckily in the Month of *June* last Dr. *Pococke* arrived at *Geneva* from his Voyages into the *Levant* and *Egypt*, which countries he had visited with great Exactness. I mentioned to him this Curiosity, and my Desire to see it, and he who was far from fearing Hardships, expressing a like Inclination, we immediately agreed to go there; when some others of our Friends found a Party was made, they likewise came into it, and I was commissioned to provide what was necessary for our setting out."

Windham had seen the *Delices de la Suisse*, and the works of Scheuchzer, and through reading these books had learnt something about the *Glacières*. "It is really Pity that so great a Curiosity should be so little known. . . As we were assured on all hands, that we should scarcely find any of the Necessaries of Life in those Parts, we took with us Sumpter Horses, loaded with Provisions, and a Tent, which was of some use to us, though the terrible Description People had given us of the Country was much exaggerated."

They set out on June 19, 1741, a party of eight, "besides five Servants, all of us well arm'd, and our Baggage-Horses attending us, so that we had very much the Air of a Caravan. The first Day we went no farther than *Bonneville*." The next night they slept at Servoz on 'clean straw in a Barn,' and on the third day arrived at Chamonix.

"Here we encamp'd, and while our Dinner was preparing, we inquired of the People of the Place about the *Glacieres*. They shewed us at first the Ends of them which reach into the Valley, and were to be seen from the Village; these appear'd only like white Rocks, or rather like immense Icicles, made by water running down the Mountain. This did not satisfy our Curiosity, and we thought we had come too far to be contented with so small a Matter; we therefore strictly inquired of the Peasants whether we could not by going up the Mountain discover something more worth our Notice. They told us we might, but the greatest Part of them represented the Thing as very difficult and laborious; they told us no-body ever went there but those whose Business it was to search for Crystal, or to shoot *Bouquetins* and *Chamois*, and that all

[1] According to M. Théophile Dufour there are records at Geneva to that effect.

the Travellers, who had been to the *Glacieres* hitherto, had been satisfied with what we had already seen.

The Prior[1] of the Place was a good old Man, who shewed us many Civilities, and endeavoured also to dissuade us; there were others who represented the Thing as mighty easy; but we perceived plainly, that they expected, that after we had bargain'd with them to be our Guides, we should soon tire, and that they should earn their Money with little Trouble. However our Curiosity got the better of these Discouragements, and relying on our Strength and Resolution, we determined to attempt climbing the Mountain. We took with us several Peasants, some to be our Guides, and others to carry Wine and Provisions. These people were so much persuaded that we should never be able to go through with our Task, that they took with them Candles and Instruments to strike Fire, in case we should be overcome with Fatigue, and be obliged to spend the Night on the Mountain. In order to prevent those amongst us who were the most in wind, from fatiguing the rest, by pushing on too fast, we made the following Rules: That no one should go out of his Rank; That he who led the way should go a slow and even Pace; That who ever found himself fatigued, or out of Breath, might call for a Halt; And lastly, that when ever we found a Spring we should drink some of our Wine, mixed with Water, and fill up the Bottles, we had emptied, with Water, to serve us at other Halts where we should find none. These Precautions were so useful to us, that, perhaps, had we not observed them, the Peasants would not have been deceived in their Conjectures.

We set out about Noon, the 22d of *June*, and crossed the *Arve* over a wooden bridge. Most Maps place the *Glacieres* on the same side with *Chamoigny*, but this is a Mistake. We were quickly at the Foot of the Mountain, and began to ascend by a very steep Path through a Wood of Firs and Larche Trees. We made many Halts to refresh ourselves, and take breath, but we kept on at a good Rate. After we had passed the Wood, we came to a kind of Meadow, full of large Stones, and Pieces of Rocks, that were broke off, and fallen down from the Mountain; the Ascent was so steep that we were obliged sometimes to cling to them with our Hands, and make use of Sticks, with sharp Irons at the End, to support ourselves. Our Road lay slant Ways, and we had several Places to cross where the *Avalanches* of Snow were fallen, and had made terrible Havock; there was nothing to be seen but Trees torn up by the Roots, and large Stones, which seemed to lie without any support; every step we set, the Ground gave way, the Snow which was mixed with it made us slip, and had it not been for our Staffs, and our Hands, we must many times have gone down the Precipice. We had an uninterrupted View quite to the Bottom of the Mountain, and the Steepness of the Descent, join'd to the Height where we were, made a View terrible enough to make most People's Heads turn. In short, after climbing with great Labour for four Hours and three Quarters, we got to the Top of the Mountain, from whence we had the Pleasure of beholding Objects of an extraordinary Nature. We were on the Top of a Mountain, which, as well as we could judge, was at least twice as high as Mount *Salève*, from thence we had a full View of the *Glacieres*. I own to you that I am extremely at a Loss how to give a right Idea of it; as I know no one thing which I have ever seen that has the least Resemblance to it.

The Description which Travellers give of the Seas of *Greenland* seems to come the nearest to it. You must imagine your Lake put in Agitation by a strong Wind, and frozen all at once, perhaps even that would not produce the same Appearance.

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Our Curiosity did not stop here, we were resolved to go down upon the Ice; we had about four hundred Yards to go down, the Descent was excessively steep, and all of a dry crumbling Earth, mixt with Gravel, and little loose Stones, which afforded us no firm footing; so that we went down partly

[1] There was no Prior at that time. Windham doubtless supposed that there must be a Prior because there was a Priory.

falling, and partly sliding on our Hands and Knees. At length we got upon the Ice, where our Difficulty ceased, for that was extremely rough, and afforded us good footing: we found in it an infinite number of Cracks, some we could step over, others were several Feet wide. These Cracks were so deep, that we could not even see to the Bottom; those who go in search of Crystal are often lost in them, but their Bodies are generally found in them after some Days, perfectly well preserved. All our Guides assured us, that these Cracks change continually, and that the whole *Glaciere* has a kind of Motion. In going up the Mountain we often heard something like a Clap of Thunder, which, as we were informed by our Guides, was caused by fresh Cracks then making; but as there were none made while we were upon the Ice, we could not determine whether it was that, or *Avalanches* of Snows, or perhaps Rocks falling; though since Travellers observe, that in *Greenland* the Ice cracks with a Noise that resembles Thunder, it might very well be what our Guides told us. As in all Countries of Ignorance People are extremely superstitious, they told us many strange Stories of Witches, &c. who came to play their pranks upon the *Glacieres*, and dance to the Sound of Instruments. We should have been surprised if we had not been entertained in these Parts, with some such idle Legends. The *Bouquetins* go in Herds often to the Number of fifteen or sixteen upon the Ice, we saw none of them; there were some *Chamois* which we shot at, but at too great a Distance to do any Execution.

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Having remained about half an Hour upon the *Glaciere*, and having drank there in Ceremony Admiral Vernon's Health, and Success to the *British* Arms, we climb'd to the Summit, from whence we came, with incredible Difficulty, the Earth giving way at every step we set. From thence, having rested ourselves a few Minutes, we began to descend, and arrived at *Chamouny* just about Sun-set, to the great Astonishment of all the People of the Place, and even of our Guides, who owned to us they thought we should not have gone through with our Undertaking."

Windham went away from Geneva in August, 1742, and on the 20th of that month a company of Genevese, whose curiosity had been raised by reading the account that he had written, started for Chamonix, stimulated by his remarks that "Barometers to measure the Height of the Mountains, portable Thermometers, and a Quadrant to take Heights with, would be useful, if there were a Mathematician in Company," and that "one who understood Drawing might find wherewithal to imploy himself, either on the Road, or in the Place itself; in short a Man of Genius might do many things which we have not done." They travelled from Geneva to Sallanches in one day, and on the morrow arrived at Chamonix. The next day was occupied in going to the Montanvert, and on the following morning they returned to Geneva. This party of Genevese was under the leading or direction of a certain Peter Martel, who wrote an account of the journey, which was published in London in 1744.[1] A facsimile, on a reduced scale, of this rare pamphlet is given overleaf.

Mr. Peter Martel termed himself 'Engineer,' and at the end of his pamphlet he stated that he made and sold Pocket and other Thermometers, and until a few years ago this seemed to be all that was known about him in England. His pamphlet contains Windham's account of his proceedings (in the form of a letter to a friend), and Martel's account of his own journey, in the form of a letter to Windham; and it is expressly stated that both letters were *translated*

[1] It will be noticed that on the title-page it is said 'As laid before the Royal Society,' but it does not appear that the Society printed the communication.

An ACCOUNT of the

GLACIERES

OR

ICE ALPS

IN

SAVOY,

In TWO LETTERS,

One from an

Engliſh Gentleman to his Friend at *Geneva*;

The other from

PETER MARTEL, Engineer, to the ſaid *Engliſh* Gntleman.

Illuſtrated with a MAP, and two Views of the PLACE, &c.

As laid before the ROYAL SOCIETY.

LONDON,
Printed for PETER MARTEL,
And Sold by *W. Meadows* in *Cornhill*; *P. Vaillant* in the *Strand*; *G. Hawkins* between the *Two Temple Gates*; *R. Dodſley* in *Pall Mall*; *J. Pallaret* againſt *Catherine Street* in the *Strand*; and *M. Cooper* in *Paſter Noſter Row*. MDCCXLIV.
(Price One Shilling and Six-pence.)

from the French. No French version was, however, known until Mons. Théophile Dufour published one in the *Echo des Alpes* in 1879,[1] prefaced by various well-authenticated details relating to the *persons in question. M. Dufour* makes it clear that Mr. Windham *published* nothing. He wrote a letter, giving an account of his proceedings, to Jaques-Antoine Arlaud, a portrait-painter living in Geneva, *at the desire of the latter.* Arlaud allowed the letter to be circulated, and the original, or a copy of it, was seen by Martel. Peter Martel's letter to Windham was also circulated in manuscript at Geneva, and both letters were seen by Mons. Baulacre (who is termed by De Saussure 'savant Bibliothécaire de notre ville'). This gentleman was in the habit of writing to the papers, and, in May and June, 1743, he sent two letters to the *Journal helvétique* of Neuchâtel, the first of which commenced thus:—

"Sir—You have heard that one has seen at Geneva, in the last year or two, some manuscript accounts of different travellers who have had the curiosity to go to examine, in Faucigny, the part of the Alps that is called the *glacières*. . . You ask me to copy the two different accounts which have appeared in our town. There would be a good deal to copy; I am rather lazy and I have no secretary at my disposal. You will be content then, if you please, with a sort of *résumé* of these two manuscripts. I shall try to melt the whole down, and to send you the essence."

Such was the manner in which the public first became informed of these two journeys. The melted or boiled-down version of the lazy Baulacre was the only account published *in French* until the appearance of M. Théophile Dufour's pamphlet in 1879. In this he gives the entire contents of Windham and Martel's two accounts, printed from one of the MS. copies that were in circulation at Geneva in the time of Baulacre, which has been discovered at Paris, in the Library of the Institute.

Researches by M. Dufour have elicited facts relating to Peter Martel. It appears that he was born in 1701 or 1702, and was the son of a French refugee, a shoemaker, who settled at Geneva at the beginning of the 18th century. Two references to the son have been discovered in the Reg. du Conseil of Geneva, both of which are to his credit;[2] and it has also been found out, from documents which are in existence at Geneva, that he ultimately went to Jamaica and died there in 1761.

If the manuscript versions of Windham and Martel's relations which have been printed by M. Dufour were exact transcripts of the original letters, the English translations (of 1744) are very free

[1] WILLIAM WINDHAM ET PIERRE MARTEL. Relations de leurs deux voyages aux Glaciers de Chamonix (1741-1742). Texte original Français publié pour la première fois avec une introduction et des notes par Théophile Dufour, Président de la Cour de justice de Genève, Directeur des Archives de l'Etat. Geneva, 1879.

[2] At Feb. 19, 1723, there is this entry. "*Gratification à Martel, pour sa machine.*—Monsieur le sindic de la garde a fait voir au Conseil un planisfère, avec un bord d'environ demi-pied de hauteur, rempli de nombre de cercles et de machines qui représentent le mouvement des planètes, selon les différens systèmes de Ptolémée et de Copernic, composé par un jeune homme nommé Martel, fils d'un cordonnier, qui a beaucoup de talent pour le dessein et pour la mécanique, dont il a fait présent à la Bibliothèque. Sur quoi étant opiné, l'avis a été de lui faire une gratification de dix louis d'or pour l'encourager."

translations. The deviations from the French are frequent, and there are additions and omissions. These differences are not of a nature to be attributed to printers' 'devils,' or compositors. Although very numerous, they are of little importance so far as facts are concerned.

The principal interest of the two narratives lies in the information they afford about the condition of Chamonix and the Chamoniards a century and a half ago. It appears that at that time, although it was customary for visitors to do little more than inspect the ends of the glaciers, there were already Guides and Porters. There was a prevalent rumour that the glaciers were increasing. Windham says he was told by his Guides "that in the time of their Fathers the *Glaciere*" (that is the Mer de Glace) "was but small, and that there was even a Passage thro' these Valleys, by which they could go into the *Val d'Aoste* in six hours." But throughout the whole of his account there is no mention of Mont Blanc, and an omission so strange makes one conjecture that it must have been invisible during his stay. Peter Martel, however, mentions Mont Blanc four times. In the English pamphlet, at p. 16, he refers to "the Mountain called *Mont blanc*"; on pp. 17 and 19 he calls it "the *Mont Blanc*"; and upon p. 22 he says "*Mont Blanc*, which is supposed to be the Heighest in all the *Glacieres*, and perhaps of all the *Alps*. Many Persons of the Country who have travelled assured me, that they had seen it from *Dijon*, and others from *Langres*, which is 135 Miles distance."

I have been unable to learn that the name Mont Blanc has been printed at an earlier date. It would seem therefore, under any circumstances, that it came into use somewhere about the time of Martel's visit. Possibly, it was invented to satisfy inquisitive visitors demanding 'what do you call this?' and 'what do you call that?' Some of the Aiguilles had been christened already. The Dru, the Charmoz (Charmeaux), the Blaitière (Blaiterie), and Mont Mallet (Mallay) were established names in 1742; and I imagine that, perhaps, when Martel pursued his inquiries, and pointing to the great snowy dome demanded 'and what do you call that?' the Chamoniards replied simply, "Oh! we call that the white mountain," without intending him to suppose that this was an established appellation. Down went Mont Blanc in his notes, and the name has stuck to the mountain ever since.

However this may be, Martel was the first to use the name on a map.[1] The shoemaker's son had the honour to introduce Mont Blanc to the world, and the fame of the Great White Mountain soon spread abroad.

[1] M. André Perrin says in his *Histoire* (at p. 6) that Bourrit was the first to give the name Mont Blanc *on a map* (the map in his *Nouvelle Description des Glacieres et Glaciers de Savoye*, published in 1785). This is incorrect. Martel gave it forty-one years earlier on the Map (Plate II) that accompanies his pamphlet.

CHAPTER II.

THE EARLIEST ATTEMPTS TO ASCEND MONT BLANC.

THE *GLACIÈRES* BECOME FAMOUS—HORACE BENEDICT DE SAUSSURE—WONDERFUL EFFECT OF FAITH—DE SAUSSURE'S REWARD—FIRST ATTEMPTS TO ASCEND MONT BLANC—THE NATIVES COMPLAIN OF TOO MUCH HEAT—MARC BOURRIT TRIES THE ST. GERVAIS SIDE—SOME OF HIS PEOPLE GET TO THE FOOT OF THE BOSSES DU DROMADAIRE—JOINT EXPEDITION OF BOURRIT AND DE SAUSSURE—A RACE FOR THE SUMMIT DECIDED IN FAVOUR OF CHAMONIX.

CHAMONIX speedily benefited from the publicity which was given to it by the circulation of Windham and Martel's letters. It soon became the *fashion* to visit the *Glacières*.

Amongst those who went there was a young man named Horace Benedict de Saussure. He belonged to an old Swiss family,[1] settled a few miles from Geneva, at a place called Genthod. Whenever he walked abroad, the Great White Mountain must have caught his eye, on the opposite side of the lake. De Saussure was a man of studious habits, and at the early age of twenty-two became Professor of Philosophy at the Academy of Geneva. "As for me," he says in his *Travels*,[2] "I had from my infancy a most decided *passion* for mountains. In 1760, I went alone and on foot to visit the Glaciers of Chamonix. I returned again the next season, and since then I have not allowed a year to pass without making journeys amongst mountains for the sake of study."

He said that so early as 1760 and 1761 he had it proclaimed in the three parishes of the valley of Chamonix that he would give a considerable reward to anyone who should discover a practicable way

[1] Horace Benedict de Saussure was born in 1740. The De Saussures trace their descent from Mongin de Savssvre, Escuyer, Seigneur de Dompmartin and de Monteul sous la ville d'Amance en Lorraine, who in 1475 was attached to the Court of René, King of Sicily and Jerusalem. His son, Antoine de Saussure, succeeded to his offices and dignities; but in 1551 became Protestant, was imprisoned and deprived of his possessions, and retired to Metz in 1552. He was ejected from Metz, and then went with his family of twelve children successively to Strasburg, Neuchâtel, and Geneva, and finally settled at Lausanne in 1556. He died in 1569. Horace Benedict de Saussure was the only son of an only son, and was eighth in a direct line from Mongin de Savssvre. I take these facts from a family tree, communicated to me by Mons. F. Henri L. de Saussure, grandson of Horace Benedict de Saussure.

[2] *Voyages dans les Alpes*, 4 vols. 4to, Neuchâtel.

to the top of the Great White Mountain, and that he would even pay for their time if their attempts were unsuccessful.[1] It does not appear, from aught we know, that anyone even contemplated the ascent of Mont Blanc before this reward was offered; or that any of the peaks of Mont Blanc had been ascended at that time, or that the Chamoniards in general were entitled to be considered mountaineers; though long before the visit of Windham they were acquainted with some of the peculiarities of glaciers, as they well might be, inasmuch as the glaciers come almost to their doors. From the following passage, taken from the *Life* of Jean d'Arathon d'Alex, published at Lyons in 1767, it is obvious they knew that glaciers sometimes advance and sometimes retreat.

"The inhabitants of a parish called Chamounix shewed in a remarkable manner the confidence they put in the blessing of their Bishop. Chamounix is upon the frontiers of the Valais, having great mountains laden with snow and ice, in summer as well as in winter; their height seems to carry their tops to the skies, and they rise almost as far as the sight can reach; and the snow and ice, continually inclining downwards, threaten to ruin the surrounding localities. As often as the Bishop visited this region, the people begged him to exorcize and to bless these icy mountains. About five years before his death[2] they sent a deputation to beg him to come once more, offering to pay his expenses, and assuring him that since his last visit the *glacières* had retreated more than eighty paces. The Bishop, delighted at their faith, replied, 'Yes, my good friends, I will come to add my prayers to yours.' He went. . . I have a declaration," says the writer, "made on oath by the most notable persons of those parts, in which it is sworn that since this benediction by Jean d'Arathon, the *glacières* have retreated, to such an extent that they are now an eighth of a league from the places where they were formerly."[3]

They knew also that persons lost upon and swallowed up by glaciers might be exhumed in the course of time, in the natural order of things. Windham says that when he got upon the ice (of the Mer de Glace) he found an infinite number of cracks (crevasses). "These Cracks were so deep that we could not even see to the Bottom; those who go in search of Crystal are often lost in them, but their Bodies are generally found again after some days, perfectly well preserved. All our Guides assured us, that these Cracks change continually, and that the whole *Glaciere* has a kind of Motion."

This passage from Windham shews that earlier than his time there were some who ventured upon, or higher than the glaciers, and were more or less mountaineers. The majority of the Chamoniards, however, do not appear to have been very advanced in mountain-craft; for, when Windham proposed to go to the Montanvert, "the greatest

[1] "Lorsque j'écrivois le discours préliminaire et la première partie de cet ouvrage, j'envisageois la cime du Mont-Blanc comme absolument inaccessible. Dans mes premières courses à Chamouni, en 1760 & 1761, j'avois fait publier dans toutes les paroisses de la vallée, que je donnerois une récompense assez considérable à ceux qui trouveroient une route praticable pour y parvenir. J'avois même promis de payer les journées de ceux qui feroient des tentatives infructueuses." De Saussure, § 1102.

[2] Jean d'Arathon d'Alex was Bishop of Geneva from 1660 to 1695, and died in the latter year.

[3] Quoted from *Oscillations des quatre grands Glaciers de la Vallée de Chamonix*, par Venance Payot, Genève, 1879.

Part of them represented the Thing as very difficult and laborious;[1] they told us that no-body ever went there but those whose Business it was to search for Crystal, or to shoot *Bouquetins* and *Chamois*," *and this although there was a path.* Therefore, one can hardly wonder



ON THE MER DE GLACE.

that De Saussure's offer did not produce immediate results. A few feeble attempts were made, which gave no promise of ultimate success.[2] It was not indeed until 1775, fifteen years after the reward was offered, that four peasants[3] made what may be called the first serious attempt to ascend the mountain. They commenced by scaling the long buttress which is called the Montagne de la Côte, and got some

[1] "We started at seven for the Mer de Glace—one of the 'lions' of Chamouni. Having been told the night before that the road was very dangerous." Albert Smith, in *The Story of Mont Blanc*, speaking of 1838.

[2] De Saussure says (§ 1102) "Pierre Simon essaya une fois du côté du Tacul, une autre fois du côté du glacier des Buissons" (Bossons). The years in which these attempts were made are not stated. "The side of the Tacul" probably meant by way of the Glacier du Géant or du Tacul. Bourrit said in 1785 that the guides thought it would not be impossible to ascend Mont Blanc by way of the Glacier du Tacul, if a sleeping-place could be found. *Nouvelle Description des Glacieres et Glaciers de Savoye*, par M. Bourrit, Genève, 1785.

[3] Their names have been preserved by Bourrit. They were Michel Paccard and his brother François, Victor Tissai, and 'the son of the respectable Couteran.'

distance up the glacier above—how high is not known. They seem to have been discouraged by finding that they could not go up and down again *in one day*, and they deemed it indispensable to make the ascent in a single day, considering that it was too hazardous to pass a night amid the snows. The peasants of Chamonix, at that time, were indeed almost entirely unacquainted with the snows and glaciers of the upper regions, although they had for a number of years conducted visitors over the *lower* portions of the Mer de Glace, and perhaps over some other of the glaciers.[1]

Eight years elapsed before there was another attempt, and then (in 1783) three others[2] tried the same way; and, in order to have as much time as possible, passed a night on the *top* of the Montagne de la Côte. At daybreak they took to the glacier, and reached a considerable elevation, but when they were at their highest point the strongest and most vigorous of the three was seized with an overpowering desire to go to sleep, and begged the others to go on without him. But they would neither do that nor let him go to sleep, and in the end they gave up the enterprise and came down to Chamonix. The great heat which occurs upon glaciers in fine weather seems to have surprised these peasants, and they seem also to have been influenced by the superstition, which still prevails in many parts of the Alps, that it is fatal to give way to sleep when at great elevations. In this case it appeared that they apprehended their companion would be killed by sunstroke. De Saussure said after this attempt in 1783, "from the information they gave, I regarded success quite impossible; and that also was the opinion of the best men in Chamonix." He remarked that even if this sleepy episode had not stopped these fine fellows (*ces braves gens*) "it is very likely they would not have got to the top, for they had still a long way to go, and the heat was exceedingly trying,—an astonishing fact at such an elevation." They made much of the heat when they returned, and Jorasse seriously told De Saussure that it was useless to carry provisions, and that if he went back again the same way he would only take a parasol and a bottle of smelling salts. "When

[1] A long-winded account of this attempt is given in Bourrit's *Nouvelle Description*, which he says is a transcript of a relation supplied by one of the guides ('the son of the respectable Couteran'); and from this it appears that the party started at 11 p.m. on July 13, and, after walking for two hours and a half, went to sleep at the foot of the Glacier de Taconnaz. At daybreak they commenced to ascend the Montagne de la Côte, mounting at first on the Taconnaz side, and at the upper part turning over to the side facing Chamonix. They found a path on the Montagne de la Côte, and a number of goats and sheep, high up, sent to fatten on the mountain during the summer. At 8 a.m. they took to the glacier, which appeared to them to be about half a league across, and they occupied more than three hours in crossing it, on account of the detours which were constantly necessary to avoid crevasses. It is related that there was on their left a rock in the middle of the snow (the Grands Mulets), and they stopped there to collect crystals. After that, the account becomes somewhat incoherent. No times are mentioned, except that they got back to Chamonix at 10 p.m. The cause of turning was that they became enveloped in clouds and feared to lose the way.

It is still customary to send sheep and goats to the Montagne de la Côte, and to leave them to themselves for weeks at a time. The fact that there was a *path* in 1775 shews that this must have been a known locality long before. The height they reached cannot be stated with any certainty. They were probably the first to get to the Grands Mulets.

[2] Jean-Marie Couttet, Lombard Meunier *dit* Jorasse and Joseph Carrier.

I picture to myself," said the Professor, "this big and robust mountaineer scaling the snows, holding a little parasol in one hand and a bottle of smelling salts in the other, nothing gives me a better idea of the difficulty of this undertaking, and its absolute impossibility to people who have neither the heads nor the limbs of a good Chamouni guide." They came back, Bourrit says, with swollen lips and dilapidated skins. These are some of the trifles, mentioned incidentally, which shew that the Chamoniards at this period were quite unaccustomed to get to considerable elevations either on snow or rock; for if they had been in the habit of doing so they would have been familiar with the fact that a considerable degree of heat is often experienced (in the sun) at great heights, and that it is by no means phenomenal to lose the skin of one's nose, or to get swollen lips.

Shortly afterwards, at some unknown date, the Monsieur Bourrit (who has been already mentioned several times) endeavoured to follow in the steps of Couttet, 'Jorasse,' and Carrier. Monsieur Marc Bourrit was born in 1735. He was an artist, and Precentor of the Cathedral Church of Geneva, who visited Chamonix and its surroundings somewhat frequently, and wrote several books upon his excursions. His intentions were better than his execution; and as a mountaineer he was not a success, though he considered that he had taken an important part in developing the guides of Chamonix.[1] At some unknown date in 1783 he arrived on the top of the Montagne de la Côte, and after having passed the night in the open air, found himself, at five o'clock in the morning, "in the region of snow and ice. It was everywhere cut up by horrible crevasses. . . I saw my companions opening up a way with their bâtons and hatchets, become all at once invisible, then reappear on pyramidal blocks; descend into labyrinths from which they could hardly escape, escalading walls forty feet high. . . When I was about to follow in their track, I saw a cloud growing round the summit of Mont Blanc, and descending upon us. This sudden phenomenon alarmed me; I called to my companions," and he bolted down to Chamonix as hard as he could go.

Somehow or other, M. Bourrit acquired the notion that an ascent might be more easily made by mounting from the side of the Glacier de Bionnassay, and then by following the ridge leading towards the summit from the Aiguille de Goûter through the Dôme du Goûter, than by ascending from the valley of Chamonix; and, learning that two Chasseurs had actually got to some height upon the Bionnassay side, he found them out and persuaded them to take him in tow. *They* started in September, 1784, but the weather was cold, Monsieur Bourrit could not stand it, and did not even reach the ridge; though two of his men did, and they followed it, they said, until they came to the foot of the two snowy humps, which are now called the Bosses du Dromadaire. Time ran short, and they came down, like all the rest, without having reached the summit.

1 "Les uns se sont formés d'eux mêmes en allant à la recherche du cristal et à la chasse des chamois; d'autres doivent leurs connoissances à M. de Saussure et à moi; non seulement nous nous en sommes fait accompagner sur la mer de glace et les sommités voisines, mais encore dans des voyages lointains en Piémont, en Vallais, dans les montagnes de la Suisse et celles du Milanois."

De Saussure heard of this, and, with the concurrence of Bourrit, had a little hut built high up on the Bionnassay side, in order that they might start from a high level. In September, 1785, they went to it, and essayed to follow the route which had been struck out the year before. But he failed even to reach the ridge. His hut was too low down; the attempt was made too late in the year; and they went back to Geneva without having accomplished any advance.

This was the first occasion that De Saussure had set foot on the mountain, and his presence on the spot probably stimulated the natives. Moreover, he shewed that he was in earnest by giving instructions to have another hut constructed, considerably higher up. He was convinced that if the summit should ever be attained it would be from that direction. The peasants of Chamonix did not, however, all share this opinion. Some were in favour of the Bionnassay side, and others espoused the valley route, and they took to betting on the subject. It was arranged that some of them should start from one side and some from the other, to see who would arrive first at the foot of the final peak. They started on June 30, 1786. Three came up from the back, and three others went *viâ* the Montagne de la Côte, and these latter arrived at the rendezvous long before the others. There was still time to spare, and they attempted to complete the ascent by following the ridge, but found that the ridge was too much for them. Just below the Bosses du Dromadaire it becomes narrow and steep, and requires the use of the ice-axe, with which the peasants of Chamonix at that time were scarcely acquainted; and so they turned to come down, convinced that it was *quite impossible* to complete the ascent by that way. This brings us down to the time when the first ascent of the Great White Mountain (le Grand Mont Blanc) was effected.





IN FRONT OF CHAMONIX CHURCH.

CHAPTER III.

THE FIRST ASCENT OF THE GREAT WHITE MOUNTAIN.

JACQUES BALMAT DISCOVERS THE *ANCIEN PASSAGE* AND NEARLY REACHES THE SUMMIT—DR. PACCARD AND BALMAT MAKE THE FIRST ASCENT—DE SAUSSURE GIVES INSTRUCTIONS TO LEVEL THE WAY—RECRIMINATIONS—WHO IS THIS DR. PACCARD?

ALONG with the three who it has been mentioned ascended from the valley of Chamonix, there was a fourth, who attached himself to the others almost against their will—a young man named Jacques Balmat. Just before they started, he is said to have passed a couple of days in searching for a route upon his own account, and he was returning, with his clothes sticking to him half frozen, when he met the others ascending. They were unwilling that he should accompany them. *They* wanted the reward, and so did *he*. But he went with them, and when the others turned back, he lingered behind to look about, and they went on, it is said, and deserted him intentionally. "Balmat is lively," remarked the others ironically, "and will catch us up." "I found myself alone," said he, "and was divided between a wish to rejoin them, and an ambition to attempt the ascent alone. I was piqued at being left behind, and something told me that, this

time, I should succeed." He decided on the latter course; descended on to a great snowy plain that is about 2600 feet below the summit (the Grand Plateau), and remounted by the exceedingly steep snow which is on the right of the engraving on p. 20,[1] digging out footsteps with the point of his bâton, until high enough to see all the rest of the way clear to the top. "It wasn't either easy or amusing, I can tell you, to be hung up so to speak on one leg, with an abyss underneath, and obliged to fashion this sort of staircase. But at last I got to the Rocher Rouge.[2] Oh! I am there, I said. There was nothing further to hinder one—no more steps to make." Night was approaching, there were clouds about, and he did not try to go to the top—less from fear of losing himself than from the conviction that he would not be seen, and that no one would believe he had been there. He came down again the same way, but on arriving at the Grand Plateau was nearly blind. "The snow had so affected my eyes that I couldn't see anything. I sat down, closed my eyes, and put my head between my hands. At the end of half an hour sight came back, but night had come. I hadn't taken two hundred steps when I felt with my bâton that the snow was giving way under my feet. I was on the edge of the great crevasse which we had crossed in the morning by a snow-bridge. I sought for it and couldn't find it. Something had to be done. I put my knapsack on the snow, tied my handkerchief round my face, and prepared to pass the night as well as I could. From the place where I was I saw the lights of Chamonix,[3] where my comrades were sitting cosily round the fire, or, it may be, were in their beds. Perhaps none of them gave a thought of me; or, if he did, it would be only to say, when stirring up the embers or drawing the counterpane over the ears, 'Just now that fool of a Jacques is beating his feet to keep them warm.'" Next morning he returned alone to his village. "All was right at home. My wife gave me something to eat, though I was more sleepy than hungry. She wanted me to go to bed in my room, but I was afraid of being tormented by the flies; so, shutting myself up in the barn, I laid down upon the hay, and slept twenty-four hours without waking."

Balmat, at this time, was twenty-four years old, and though so young had already made two attempts to ascend Mont Blanc. Once he had passed a night on the top of the Montagne de la Côte, and on the next day reached the Grand Plateau, *alone*. He had now done a more notable thing, but still did not awake to find himself famous; for no one, not even his wife, knew the information he had gained. If he divulged it, he could not hope to profit. Hence, "upon return to Chamonix, at first he kept his discovery a secret. But as he understood that Dr. Paccard was thinking of making some attempts on the mountain he communicated his secret to him, and offered to act as his guide" to the summit. So says De Saussure

[1] This is now termed the '*ancien passage*' (*i.e.* the old way).

[2] The Rocher Rouge is the great cliff seen in the engraving on p. 20. Its situation in relation to the summit will be understood by reference to the large engraving of Mont Blanc from the Brevent, facing p. 104.

[3] It is to be remarked, however, that Chamonix cannot be seen from the Grand Plateau.

DR. JANSSEN'S HUT



THE ROCHERS ROUGES AND THE "ANCIEN PASSAGE."

in Vol. IV. of his *Voyages*. Paccard, the Village Doctor, was known to Chamoniards as a mountaineering amateur, and in 1786 was about twenty-nine years of age. Though he might be little service as a companion, he could be useful as a witness. Paccard agreed to go. Then three weeks of bad weather intervened; but at last, on August 8, 1786, it seemed fine enough to start. "All our little matters having been arranged," said Balmat,[1] "and good-bye said to our wives, we set out about five in the afternoon, one taking the right and the other the left bank of the River Arve, in order that no one should guess what we were about, and we rejoined each other at the village of La Côte." They camped at the top of the Montagne de la Côte (the long buttress which is seen in the engraving on p. 25, extending from the valley towards the summit), about 5500 feet above Chamonix. So far there was no difficulty. "I slept like a top," said Balmat, "until about half-past one," and then awoke the doctor. "The sun arose cloudless, bright and shining, promising us a grand day."

The top of the Montagne de la Côte abuts on the glaciers which extend continuously to the summit of Mont Blanc. The Glacier de Taconnaz descends on its right and the Glacier des Bossons on its left, and at the place where they separate the ice is extremely fissured and difficult to traverse. Balmat made no fuss about this. "In a quarter of an hour," said he, "we took to the Glacier de Taconnaz. The first steps of the doctor were rather unsteady, but seeing how I managed he gained confidence. We soon left the Grands Mulets behind us.[2] I pointed out the place where I had passed my first night. He made a significant grimace, and held his tongue for ten minutes, then said all at once, 'Do you think, Balmat, that we shall get to the top to-day?' I promised nothing. For two hours more we continued to ascend in the same way. After the (Grand) Plateau, the wind rose, and grew higher and higher. At last, on arriving where the rocks which we called the Petit Mulet[3] peep out, a violent gust carried away the doctor's hat. I saw it scuttling away, while he looked after it with outstretched arms. 'Oh! Doctor,' I said, 'you will have to go into mourning; you'll see it no more. It's off to Piedmont. Good-bye!'

"I had hardly shut my mouth when there came such a squall as made us lie flat on our stomachs, and for ten minutes we couldn't get up again. The doctor was discouraged. As for me, just then I was thinking only about the shop-keeper who ought to be looking out for us,[4] and I stood up at the first opportunity, but the doctor

[1] The account that follows of the ascent with Paccard is principally taken from the relation of it which was given by Balmat to Alexandre Dumas in 1832, forty-six years after the event.

[2] The Grands Mulets is the name given to the first little group of Aiguilles which appear through the ice, above the Montagne de la Côte. They are at the left-hand bottom corner of the engraving, Mont Blanc from the Brevent, facing p. 104.

[3] Balmat disposes of the greater part of the ascent in half-a-dozen lines. The Petits Mulets (as the rocks to which he refers are now termed) are a small patch only 350 feet below the summit, 600 feet above the top of the Rochers Rouges, and about 5300 feet above the Grands Mulets.

[4] Before leaving Chamonix, they had told a *marchande de sirop* to look out for them, near the top of the mountain, at a certain time.

would only follow on all fours. In this fashion we came to a place where the village could be seen; I got out my glass, and twelve thousand feet below in the valley made out our gossip, and a crowd of others looking at us through telescopes. Considerations of self-respect influenced the doctor to get on his legs, and the moment he was up they recognised us, he in his big frock-coat and I in my regular dress. Down below they waved their hats, and I replied with mine.

"Paccard had used up his strength in getting on his legs, and neither the encouragement we received nor that which I gave him made him continue upwards. After I had exhausted all my eloquence and saw that I was only losing time, I told him to keep in movement and as warm as possible. He listened without hearing, and answered 'Yes, yes,' to get rid of me. He was suffering from the cold, and I myself was benumbed. I went off by myself, saying that I would come back to look for him. 'Yes, yes,' he replied. I recommended him again not to keep still; but I had not gone thirty steps, when, on looking round, I saw that, instead of running about and beating his feet to keep them alive, he was sitting with his back to the wind.

"From this time the way did not present any particular difficulty, but, as I got higher, the air became less and less fit to breathe. Every ten steps I was obliged to stop. It seemed as if I had an empty chest and no lungs, and the cold laid hold of me more and more. I went on, with face lowered, but presently, not knowing where I was, raised my head and saw that at last I was on the summit of Mont Blanc. Looking around, trembling lest I was mistaken, and should see some fresh aiguille or new point which I should not have strength to scale, the joints of my legs only seemed to hold together by the help of my trousers. But no! no! I was at the end of my journey. I was where no one had ever been before. Then I turned towards Chamonix, waving my hat at the end of my bâton, and saw through my glass that they answered me.

"When this exciting moment was over, I thought of my poor doctor; and, descending to him as quickly as possible, called him by name—quite frightened not to hear him answer. At the end of a quarter of an hour I saw him from afar, round as a ball, not moving, notwithstanding the shouts which he certainly must have heard. I found him doubled up with his head between his knees, like a cat making itself into a muff. I slapped him on the shoulder, and he mechanically raised his head. I told him that I had reached the summit of Mont Blanc, but that appeared to interest him very little, for he only answered by inquiring where he could lie down and go to sleep. I told him that he had come on purpose to go to the top of the mountain, and that he must go there. I shook him, took him by the shoulders, and made him go a few steps; but he appeared stupefied, and as if it were all the same whether he went one way or another, either up or down. However, the exercise I compelled him to take restored his circulation somewhat, and he asked if I hadn't by chance another pair of gloves in my pocket like those which were on my hands. They were of hareskin and had been made

expressly for the occasion, without divisions between the fingers. In a similar situation, I would have refused *both* to my brother, but I gave him *one*. Soon after six we were on the summit of Mont Blanc.

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"Seven o'clock came; there were only two hours and a half more of daylight; it was time to be off. I caught Paccard again under the arm, waved my hat as a last signal to those below, and we began to go down. There was no track to direct us except the little holes which had been made with the points of our iron-shod bâtons. Paccard was no better than a child, without will or energy, whom I guided over the good bits and carried over the bad ones. Night began to close in when we crossed the big crevasse, and caught us below the Grand Plateau. Paccard stopped every moment, declaring that he could go no farther, and I was obliged to compel him to go forward, not by persuasion but by force. At eleven o'clock we got out of the ice-world, and set foot on *terra firma*."

They had now got back to the top of the Montagne de la Côte. Balmat remarked here that the doctor made no use of his hands, and found that he had lost sensation in them. "I drew off his gloves; his hands were white, and as if dead." One of Balmat's own hands was in a similar state.

"I told him that there were three frost-bitten hands between the two of us, but he only wanted to lie down and go to sleep, though he told me to rub my hand with snow. The remedy wasn't far off. I commenced on him, and finished on myself. Presently the blood came back, and with it warmth, but with the most exquisite pain. . . I rolled up my doll in the rug, put him under shelter of a rock, we ate a bit, drank a drop, pressed one against the other as close as we could, and went to sleep."

Next morning the doctor was snow-blind, and was led down holding on to a strap of his guide's knapsack; and Balmat said that he himself was unrecognisable. "I had red eyes, a black face, and blue ears." Four days afterwards he left for Geneva to announce his success.

But before Balmat and Paccard came back, a special messenger was already on his way to Geneva, sent by a sharp innkeeper, who hoped to secure the patronage of De Saussure. The reply which came from the Professor is an interesting document. It commenced thus:

"I am very much obliged to you, my dear Jean-Pierre, for sending an express to inform me of the happy result of Dr. Paccard's expedition. I was so delighted at the news that I gave two new crowns to the messenger. . .

"Now, I am going to tell you something that you must keep a profound secret, and this is that I myself wish to try the same route; not that I flatter myself I shall get to the top, for I have neither the youth nor the agility of Monsieur the Doctor; but I may get, anyhow, to a considerable elevation, and make there some observations and experiments which will be very important to me. Now, as it appears that it is very troublesome to get across the glacier which is above the Montagne de la Côte, I wish you to send at once five or six men to level the way, so far as such a thing is possible. You will give them good wages. . . You can put at their head this Jacques Balmat, who made the journey with Monsieur Paccard, and give him higher pay."

And then, after various other directions, comes this curious passage. "But, in all this, I expressly forbid you to mention my name: say that all this has been ordered by an Italian nobleman, who does not wish to be known. I have the strongest reasons for wanting not to be talked about, and that no one shall know I have got this idea in my head." What these reasons were we do not know. He came to Chamonix a week after writing the letter,[1] but bad weather set in, and another *year* passed before De Saussure stood on the summit of Mont Blanc. On August 1, 1787, he set out with seventeen men led by Jacques Balmat, and passed the first night on the top of the Montagne de la Côte, the next under tent near the edge of the Grand Plateau, and upon August 3, at 11 a.m., "I enjoyed," he said, "the pleasure of the accomplishment of the project which I had planned twenty-seven years before, namely, upon my first journey to Chamonix in 1760—a project which I had often abandoned and taken up again, which was a constant matter of care and anxiety to my family."

In the book by M. de Saussure a plate of Mont Blanc is given, with his track marked thereon; and, although this plate inaccurately represents the mountain, one can tell from it where he went, and the route that was first of all discovered by Balmat, which was subsequently followed by Balmat and Paccard.[2] The opinion of De Saussure (printed nine years after his ascent) was that this route was "very certainly the only one by which the summit could be gained." In this he was *mistaken*: the mountain has, since then, been ascended from half-a-dozen different directions. But the route taken on the first ascent is the most direct of all, and, in some respects, is the most natural one.[3]

An episode relating to Jacques Balmat remains to be mentioned, which appears to have been overlooked or ignored by writers on Mont Blanc. In the number of the *Journal de Lausanne* for February 24, 1787, an anonymous article appeared questioning the accuracy of the account of the ascent which was generally received. It claimed that Paccard had *discovered* the route which was followed; it stated that he had 'selected' Jacques Balmat to accompany him, and had done so merely because the other guides were away and he was the only one unoccupied; and that he was selected not as a *guide* but as a *workman*. "*He* was guided," said this anonymous communication,

[1] The original letter *from* De Saussure was recently, and I suppose is still, in existence. It was given by Mons. Edward Tairraz to the late Mr. Albert Smith. The letter *to* De Saussure, advising him that Mont Blanc had been ascended, was written by Jean Pierre Tairraz, who kept a little inn at Chamonix.

[2] The engraving on p. 25 is a reproduction of this plate.

[3] The first route has been improved upon, and to some extent has been superseded. The usual course is to proceed from Chamonix (3445 feet) to the Pierre Pointue (6723). So far there is a mule path. From the Pierre Pointue to the spot called Pierre l'Echelle (7910), at the edge of the right bank of the Glacier des Bossons, there is a rough path. The Glacier des Bossons is then crossed to the rocks called the Grands Mulets (10,113), and there the original route is taken up, and followed so far as the Grand Plateau (about 12,900). Balmat's route is then departed from, and there are two ways, which are used about equally—one by the ridge of the Bosses, and the other by what is termed 'the Corridor'—a steep bank of glacier leading from a break in the Mont Maudit ridge down to the Grand Plateau. Those who ascend by the latter way take up Balmat's route again upon reaching the top of the Rochers Rouges.



VIEW OF MONT BLANC, SHEWING THE ROUTE TAKEN BY DE SAUSSURE IN 1787.

"and encouraged by M. Paccard. Paccard pressed him to go on when he wanted to turn back. Balmat was useful to him, doubtless, *but not in attaining the summit.* . . Balmat did *not* get there the first—M. Paccard has certificates which prove this"—and he "was not unrewarded, for the Doctor gave him money."

M. Bourrit took up his pen in defence of the Chamonix guide, and sent a letter to the *Journal de Lausanne*, which appeared in its numbers for March 10 and 17, 1787. He contradicted point-blank some of the above statements, and challenged the production of the certificates. "If M. Paccard rewarded Balmat," said Bourrit, "it must have been *after* the publication of my letter; for I know that he offered him a crown, and that Balmat refused it." This caused the publication in the *Journal de Lausanne* for May 12, 1787, of two declarations (purporting to be signed by Balmat), which were prefaced by the following editorial remarks. "Our impartiality led us to insert, in our 13th, 15th, and 16th numbers, the complaints of Dr. Paccard[1] and M. Bourrit. . . We admit to-day the following certificates, which we do not feel able to refuse to insert. But we will say now, to those interested in this dispute, that the scheme of our paper will not allow us to occupy the attention of our readers any longer on such matters, which, perhaps, are not generally interesting." Then follow the declarations.

"I the undersigned Jacques, son of J. T. Balmat, of Pelerins, Commune of Chamonix, declare to all those it may concern, that I offered my services to Doctor M. Paccard, having learned that he wished to make a new attempt on Mont Blanc, in continuation of those which he had already made, and knowing that his own guide was away.

"As he proposed to go by the side of the Montagne de la Côte, which we thought was an impracticable route, I had doubts as to the success of the enterprise; but he told me that he had examined this direction, for the space of three years, with his telescope.

"I declare that except for the steady manner in which he proceeded we should never have succeeded; that he continually encouraged me; that he shared my labour, and sometimes himself carried a portion of the things he had given me to carry; that when I wanted to come down, as I had promised, to be of assistance to my wife and a child who was ill (this latter died on the 8th of August), he regarded my representations as excuses.

"He would not follow the route which we had taken on our last attempt, but kept straight on to the middle of the plain which is above the Glacier des Bossons. He himself traced for me his new route, by going before me, up a steep slope, which is at the foot of the great Mont Blanc. As he had always said that we should sleep out on the mountain, he made me look for a camping-place, as soon as we got to the top of this slope, whilst he ascended to examine the rocks. Not finding any, he determined to ascend the same evening to the summit, the object we were in pursuit of. He called to me, and I followed. At the same moment, I saw something dark pass above me—it was his hat, which the wind carried away with such velocity that we saw it no more.

'The Doctor continued to ascend nimbly. We came to a little rock, behind which I sheltered myself from the wind, whilst he examined it, and made collections. We were near the top of the mountain. I bore away to the left to avoid a snow slope, which Mons. Paccard courageously scaled to get straight to the summit of Mont Blanc. The detour I made delayed me somewhat, and I was obliged to run, to be nearly as soon as he was on the aforesaid spot.

[1] Hence it appears that the anonymous article was written by Dr. Paccard.

"He made experiments there, and observations, which he wrote down. He left a mark there, and we then came down at once, quickly, following our track, and looking for it in turn. We arrived on the top of the Montagne de la Côte, where Mons. Paccard slept, on the side exposed to the glacier.

"He fed me, he paid me, and handed over money which had been given to him to transmit. In witness of which I sign this at the Bourg of Chamonix, this 18th of October, 1786, in presence of the undersigned witnesses.

"JACQUES BALMAT.

'Counter-signed by Joseph Pot and Joseph Marie Crussa, the requisite witnesses, called expressly."

SECOND TESTIMONY OF THE AFORESAID J. BALMAT.

"I, the undersigned, certify having received of Dr. Paccard a new crown on the part of the Baron de Gersdorf, on August 10, 1786, at the same time as my wage.

JACQUES BALMAT.

"Chamonix, 25th of March, 1787."

It must be taken for granted that Balmat actually signed these documents, but the question arises, did he know what he was signing? Their obvious aim is the glorification of Paccard. From first to last it is Paccard who said this or did that. The merit of having pointed out and led the way, and the honour of first reaching the summit, are declared to be his. It is Paccard who helps and encourages Balmat, not Balmat who assists the doctor. If one believes Balmat, the village doctor cut a sorry figure on Mont Blanc. If one credits Paccard, the part taken by Balmat was quite subordinate. Though these curious documents may have answered their purpose at the time of publication, posterity has not estimated Paccard so highly as he might have wished. A monument has been raised in Chamonix to Balmat, and another to De Saussure. Whilst their names are remembered with gratitude, that of the village doctor is wellnigh forgotten; and, if one were to make inquiries about him, it is more than likely that the answer would be, "Who is this Doctor Paccard?"[1]

[1] Dr. Paccard continued to live at Chamonix for many years, and is referred to in several of the accounts of early ascents of Mont Blanc. At the conclusion of the famous interview between Alexandre Dumas and Balmat in 1832 the former enquired:

"'Et le docteur Paccard, est-il resté aveugle?'

'Ah! oui, aveugle! il est mort il y a onze mois, à l'âge de soixante-dix-neuf ans, et il lisait encore sans ses lunettes. Seulement il avait les yeux diablement rouges.'

'Des suites de son ascension?'

'Oh! que non!'

'Et de quoi alors?'

'Le bonhomme levait un peu le coude.'"

It will be seen from the above extract that Dr. Paccard is said to have died in 1831, aged 79. There is, however, a slip of paper pasted on to the fly-leaf at the beginning of the "Registre No. 10 des Ascensions au Mont Blanc," which is kept in the Bureau des Guides at Chamonix, upon which there is written—

"Décès.

L'an 1827 le 21 Mai à deux heures après midi est decédé âgé de soixante-dix ans, muni des sacrements et le surlendemain a été inhumé Michel Gabriel fils des défunts Joseph Paccard et Aimée Pessat.

(Signé) Simond Curé."

I am told that this Michel Gabriel was the Dr. Paccard who accompanied Balmat; and M. the Curé of Chamonix informs me that this copy in the "Registre" is in conformity with the original entry.

CHAPTER IV.

ASCENT OF MONT BLANC BY HORACE BENEDICT DE SAUSSURE.[1]

DE SAUSSURE STARTS, LED BY JACQUES BALMAT—THEY CAMP ON THE TOP OF THE MONTAGNE DE LA CÔTE—ARE AFFECTED BY 'RAREFACTION OF THE AIR'—STOP A SECOND NIGHT AT THE EDGE OF THE GRAND PLATEAU—REACH THE SUMMIT ON AUG. 3, 1787—PASS A THIRD NIGHT OUT—RENCONTRE WITH BOURRIT.

THE Public have learnt from various periodical publications, that in the month of August, last year, two Chamoniards, M. Paccard, Doctor of medicine, and Jaques[2] Balmat, guide, got to the summit of Mont Blanc, which until then had been considered inaccessible.

I heard of it the next day, and set out for the spot to endeavour to follow their track, but rain and snow obliged me to give it up for that season. I left with Jaques Balmat a commission to examine the mountain as early as the beginning of June, and to advise me directly it became accessible by the lessening of the winter snow. In the meantime I went to Provence, to make at the level of the sea some experiments which might be compared with those which I proposed to attempt on Mont Blanc.

Jaques Balmat made two unsuccessful attempts in the month of June; however, he wrote to me that he had no doubt that we should be able to get up at the beginning of July. I then set out for Chamouni. I met at Sallenche the courageous Balmat who was coming to Geneva to tell me about his latest success,—he had ascended to the summit on July 5 with two other guides, Jean-Michel Cachat and Alexis Tournier. It was raining when I got to Chamouni, and bad weather continued for nearly four weeks. But I resolved to wait to the end of the season rather than miss a favourable opportunity.

The moment so much longed for came at last, and I set out on

[1] This account is given by De Saussure in Chapter II. of the fourth volume of his *Voyages dans les Alpes*, and is headed "Relation abrégée d'un voyage à la cime du Mont Blanc en Août 1787." In a note he says, "This account is that which I published in 1787, immediately upon my return. As the public appeared satisfied with it, I have preserved it without alteration."

[2] Throughout this account, De Saussure's spelling of proper names is retained. My own notes and comments can be distinguished from De Saussure's by being bracketed.

the first of August, accompanied by a servant and 18 guides[1] who carried my physical instruments and the apparatus that I wanted. My eldest son ardently desired to come with me, but I was afraid that he was not sufficiently robust or accustomed to excursions of this nature. I obliged him to give it up. He remained at *le Prieuré*,



MONUMENT AT CHAMONIX TO HORACE BENEDICT DE SAUSSURE.

where he made, with much care, corresponding observations with those that I made on the summit.

Although it is scarcely two and a quarter leagues in a straight line from the *Prieuré de Chamouni* to the summit of Mont Blanc, this

[1] Here are their names.

Jaques Balmat, dit *le Mont-Blanc*.	*Jean-Michel* Dévouassou, frères.
Pierre Balmat.	*Michel* Dévouassou, frères.
Marie Coutet.	*François* Dévouassou, frères.
Jaques Balmat, domest. de Mde. Couteran.	*Pierre* Dévouassou, frères.
Jean-Michel Cachat, dit *le Géant*.	*François* Coutet.
Jean-Baptiste Lombard, dit *Jorasse*.	 Ravanet.*
Alexis Tournier.	*Pierre-François* Favret
Alexis Balmat.	*Jean-Pierre* Cachat.
Jean-Louis Dévouassou.	*Jean-Michel* Tournier.

* [Evidently a misprint for Ravanel.]

excursion has always required about 18 hours' walking, because there are *mauvais pas*, *détours*, and about 1920 toises of ascent.

I carried a tent in order to be perfectly free in the selection of places to pass the night; and on the first evening I camped under this tent at the top of the *montagne de la Côte*, which is situated to the south of *le Prieuré*, and at 779 toises above that village. This day is free from trouble and danger; one goes over turf or rock, and gets to the top easily in five or six hours. But thence to the summit, one only walks over snow or ice.

The second day is not altogether easy. At first one must traverse the glacier de la Côte[1] to reach the foot of a little chain of rocks which are enclosed by the snows of Mont Blanc. This glacier is difficult and dangerous. It is interspersed with large, deep, and irregular crevasses, and often one can only cross them by snow-bridges, which are sometimes very thin, and hanging over abysses. One of my guides just missed losing his life there. He went overnight with two others to reconnoitre. Fortunately they took the precaution to tie themselves together with rope; the snow gave way under him in the middle of a large and deep crevasse, and he remained suspended between his two comrades. We passed close to the hole which was made under him, and I shuddered at seeing the danger he had encountered. The passage of this glacier is so difficult and tortuous, that it took three hours to go from the top of la Côte to the first rocks of the isolated chain,[2] although it is scarcely more than a quarter of a league as the crow flies.

After having reached these rocks, one recedes at first from them to ascend in a winding manner in a valley filled with snow, which runs from North to South to the foot of the highest point.[3] This snow is intersected at intervals by enormous and superb crevasses. Their clean sections shew the snow arranged in horizontal beds, and each of these beds corresponds with a year.[4] Whatever may be the size of these crevasses, one never sees to the bottom.

My guides wanted to pass the night upon some of these rocks; but as the highest of them were still 600 to 700 toises below the summit I wished to get higher. To do so one must camp in the middle of the snow, and I had much trouble in getting my travelling companions to assent to this. They imagined that absolutely insupportable cold reigned at night in these high regions, and were seriously afraid that they would perish there. I told them at last I was determined to go

1 [There is no Glacier de la Côte. The Montagne de la Côte, it will be seen by reference to the Map, is the ridge or buttress dividing the lower portions of the Glacs. des Bossons and de Taconnaz. The 'little chain of rocks' are those now called the Grands Mulets, etc., and are doubtless a continuation of the ridge which, lower down, is called the Montagne de la Côte.]

2 [In 1894, when making an ascent of Mont Blanc by this route, I occupied the same length of time, though led by such good icemen as Daniel Maquignaz and M. Zurbriggen. The part of the glacier that is traversed is now called 'the junction.']

3 [This is very accurately stated. At present, upon leaving the Grands Mulets, a course is steered across the Glacier de Taconnaz towards the Aiguille de Goûter. See the Map, and the engraving of Mont Blanc from the Brevent, facing page 104, on which the route at present followed is laid down.]

4 [This is very doubtful.]

there with those upon whom I could rely, that we would dig deep down into the snow and cover the excavation with the tent-cloth, that we should be enclosed all together, and so should not suffer from cold, however severe it might be. This arrangement reassured them, and we went forwards.

At four in the afternoon we reached the second of the three great snowy plateaux which we had to cross, and there we encamped at 1455 toises above le Prieuré and 1995 above the sea, 90 toises higher than the top of the Peak of Teneriffe. We did not go so far as the last plateau, because one is exposed there to avalanches.[1] The first plateau that we crossed is not exempt from them. We traversed two avalanches that had fallen since Balmat's last ascent, the debris of which covered the whole breadth of the valley.

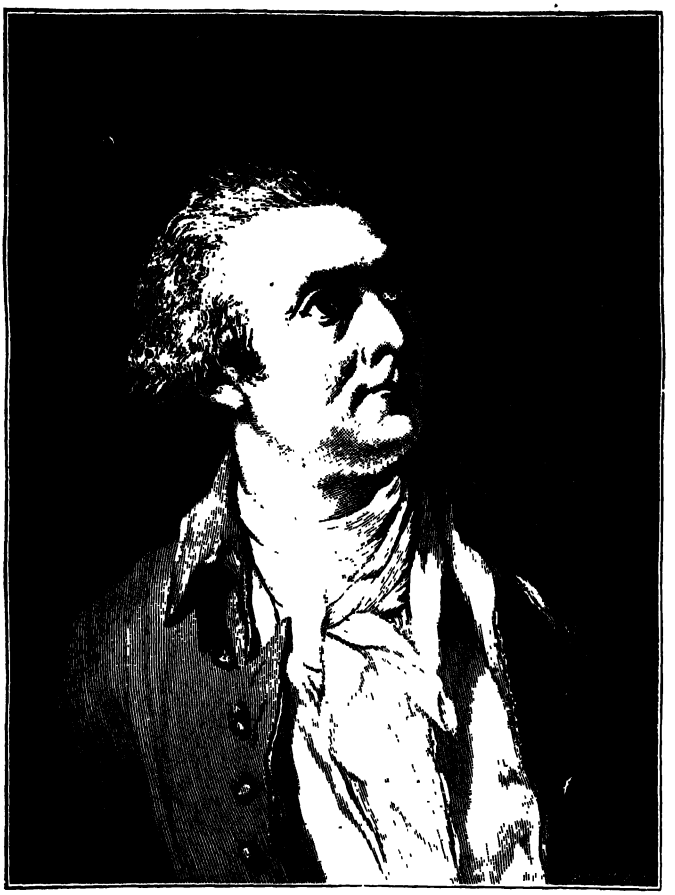
My guides at once set to work to excavate the place where we were to pass the night, but they soon felt the effect of rarefaction of the air. These hardy men, to whom seven or eight hours' walking counts as nothing, did not throw out more than five or six shovelfuls of snow before they found it impossible to continue, and were obliged to relieve each other from one minute to another. One of them, who went back to get in a cask some water which we had seen in a crevasse, was taken ill whilst going down, came back without any water, and passed the evening in great suffering. I myself, who am so accustomed to the mountain air that I feel better in it than down below, I was exhausted with fatigue when observing my meteorological instruments. This indisposition produced a burning thirst, and we could only get water by melting snow; for the water which we had seen when coming up was found frozen when we went back for it, and the little furnace (*réchaud à charbon*) which I had brought supplied twenty thirsty people very slowly.

From the middle of this plateau, enclosed between the summit of Mont Blanc on the south, steep slopes on the east, and the Dôme du Goûter on the west, one sees scarcely anything but snow, pure and of a dazzling whiteness, contrasting remarkably on the high elevation

[1] [The 'third' and 'last' plateau referred to by De Saussure is now called the Grand Plateau, and it is, as he says, exposed to avalanches, that fall on to it from the glacier (underneath the summit) which extends from the Rochers Rouges to the Bosses du Dromadaire. See engraving of Mont Blanc from the Brevent. De Saussure could not have been aware from personal knowledge that avalanches fell there, but it does not appear from whom he learnt this, or at whose advice he pitched his camp where he did.

The engraving on page 25 is a reproduction of Pl. II. vol. iv. of De Saussure's *Voyages*, which gives his track. The two asterisks indicate the places where he encamped when ascending. (*Places où l'on a campé en montant.*) The lower one is placed a little below the top of the Montagne de la Côte. At that position there are at the present time some very large boulders, and it was against these De Saussure's camp was made. This is clear from a later narrative in which he enters more into detail. A little lower down the track is made to pass along the side of the Glacier des Bossons. I doubt very much if he did so,—firstly, from the nature of the glacier at that point, and, secondly, because there is no mention of anything of the kind in the narrative. On the contrary, he states regarding the first day, "This day is free from trouble; one goes over *turf or rock.*"

The higher camp he expressly states was not made upon the third (*i.e.* the Grand) plateau. "We did not go so far as the last plateau;" but upon the engraving the asterisk is placed *higher* than the Grand Plateau. These may be mistakes of the draughtsman of the plate; anyhow, the plate does not agree with the narrative.]



HORACE BENEDICT DE SAUSSURE,

FROM THE PICTURE IN THE UNIVERSITY LIBRARY, GENEVA.

with the almost black sky of these lofty regions. No living being is seen, no trace of vegetation; it is the abode of frost and stillness. When I pictured to myself Doctor Paccard and Jaques Balmat arriving in this wilderness towards the end of the day, without shelter or assistance, without even the certainty that men could live in the places where they aspired to go, yet always pursuing their course with intrepidity, I admired their strength, spirit, and courage.

My guides, always preoccupied by fear of cold, closed the tent so tightly that I suffered much from heat and the stuffiness of the atmosphere. In the course of the night I was obliged to go out to breathe. The moon shone brilliantly in an ebony sky. . . We had at last begun to sleep when we were aroused by the noise of a great avalanche, which covered a part of the slope we had to ascend the next day. At daybreak the thermometer stood at three degrees below freezing point.

We started late, because it was necessary to melt snow for breakfast and for use on the way. It was drank as soon as melted, and these people who took religious care of the wine that I brought, robbed me continually of the water which was kept in reserve.

We began by ascending to the third and last plateau, then we bore away to the left to get to the highest rock on the East of the summit. The slope is extremely steep, 39 degrees in some places; everywhere it abutted on precipices, and the surface of the snow was so hard that those who went first could not make sure of their footing without using an axe. We took two hours to scale this slope, which is about 250 toises high. Arrived at the last rock, we turned again to the right, to the West,[1] to climb the last slope, the perpendicular height of which is about 150 toises. This slope has an inclination of only about 28 or 29 degrees, and is free from danger; but the air is so thin there that the strength is rapidly exhausted. I could not take more than 15 or 16 steps at a time without stopping to breathe, I felt even from time to time a tendency to swoon which obliged me to sit down; but as respiration was righted I felt my strength restored; it seemed when recommencing to walk that I could go in a flash to the summit of the mountain. All my guides were in the same condition. We took two hours from the last rock to the top, and it was eleven o'clock when we got there.[2]

My first looks were directed to Chamouni, where I knew that my wife and her two sisters, with eyes fixed at the telescope, were watching my movements with uneasiness. . . I could then enjoy the grand spectacle which I had beneath my eyes. Light vapours hanging about the lower regions robbed me indeed of the lowest and the farthest details, such as the plains of France and Lombardy; but I did not much regret this loss; that which I came to see, and what I saw most clearly, was the general effect of the high summits whose arrangement I had so long wanted to understand. I couldn't believe

[1] [This is not correct,—the course is more south than west.]

[2] [De Saussure's 'last rock' is evidently the top of the Rochers Rouges, the position at present occupied by Dr. Janssen's hut. The last rocks, however, on this side (the Petits Rochers Rouges and the Petits Mulets) are higher up.]

my eyes, it seemed like a dream, to see beneath my feet these majestic peaks, these formidable Aiguilles, le Midi, l'Argentière, le Géant, to get to whose very bases had been for me so difficult and so dangerous. I seized their bearings, their connexion, their structure, and a single glance cleared away doubts which years of work had not been able to enlighten.

During this time the guides pitched my tent, and set up the little table for my experiments with boiling-water. But when I began to arrange and to observe my instruments, I found myself constantly compelled to leave off work to take care of my respiration. If one considers that the barometer stood at only 16 inches and 1 line[1] [French], and that the air, thus, was scarcely more than half its usual density, it will be understood that it was necessary to make up for the want of density by frequency of inspiration. This quickening accelerated the movement of the blood, so much the more as the arteries were not subjected externally to the usual pressure. Thus we were all feverish.

When I kept perfectly quiet I experienced but little discomfort – a slight tendency to sickness. But when I took trouble, or when I kept my attention fixed for several seconds continuously, and especially when I compressed the chest in stooping, I was obliged to rest and pant for two or three minutes. My guides experienced similar sensations. They had no appetite, and indeed our provisions, which were all frozen *en route*, were not calculated to excite one. They did not even care for wine and *eau-de-vie*. In fact they had found out that strong drink made them worse, doubtless, by further acceleration of the circulation. Water alone did them good and gave pleasure, and it needed time and trouble to light the fire, without which we couldn't have any.

I remained, however, upon the summit until half-past three, and though I did not lose a single moment I could not make in those four hours and a half all the experiments which I have frequently performed in less than three hours at the level of the sea. I made carefully, nevertheless, those which were the most important.

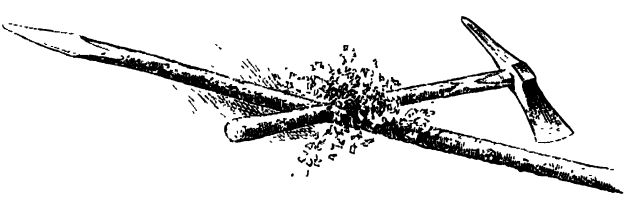
I descended much more easily than might have been expected. As one's movements in coming down do not compress the diaphragm, respiration is not upset, and one is not obliged to stop for breath. The descent from the rock [Rochers Rouges] to the first plateau [the Grand Plateau] was however very difficult on account of its steepness, and the sun lighted up the precipices at our feet so brilliantly that good heads were necessary not to be frightened. I camped again on snow, 200 toises lower than the previous night. It was there I became convinced it was the rarity of the air which had incommoded us on the summit, for if it had been fatigue we should have been much worse after this long and tiring descent; but on the

[1] [Equal to about 435 millimètres. From another observation he obtained a slightly lower reading. His *mean* appears to have been about 434 mm. This was on August 3, 1787. Fifty-seven years later (Aug. 1844) Charles Martins found the *mean* of four observations of mercurial barometer, reduced to 32° F., was 424·27 mm., and fifty years after Martins (July 26-27, 1894) I found the mean of seven observations of mercurial barometer, reduced to 32° F., was 423 mm.]

contrary we ate with a good appetite, and I made my observations without any discomfort. I think that the height where ill-effects begin to be felt is perfectly decided for each individual person. I keep very well up to 1900 toises [12,150 feet] above the sea, but I commence to feel inconvenience when I get higher.

On the morrow we found the glacier de la Côte had undergone changes from the heat of the two past days, and was still more difficult to cross than it had been on the ascent. We were obliged to descend a slope of snow at an inclination of 50 degrees, to avoid a crevasse which had opened during our journey. At length, at half-past nine, we landed on the montagne de la Côte, well pleased to find ourselves on soil which we were not afraid would yield under our feet.

I met there M. Bourrit, who would have engaged some of my guides to remount immediately with him; but they found themselves very tired, and wished for rest at Chamouni. We descended all together merrily to the Prieuré, and arrived in time for dinner. I had much pleasure in bringing them back safe and sound, with their eyes and faces in the best condition. The black crape with which we had covered our faces perfectly protected us, instead of which our predecessors had come back almost blind, and with their faces burnt, cracked, and bleeding from the "*réverbération des neiges.*"



ICE-AXE AND BÂTON.

CHAPTER V.

CONTINUATION OF HISTORY OF CHAMONIX AND MONT BLANC.

DE SAUSSURE'S FOLLOWERS—HIS RESIDENCE ON THE COL DU GÉANT—HIS *BARRIÈRE AMBULANTE*—DEVIATIONS FROM THE ORIGINAL ROUTE UP MONT BLANC—THE 'CORRIDOR' ROUTE—ALEXANDRE DUMAS AND JACQUES BALMAT—AUGUSTE BALMAT—ALBERT SMITH AND HIS SHOW—FIRST ASCENT OF MONT BLANC FROM ST. GERVAIS—*THE ROUTE BY THE 'BOSSES'*—NAPOLEON III VISITS CHAMONIX—*MONT BLANC INVADED*—TABLE OF ASCENTS.

HORACE BENEDICT DE SAUSSURE was not a mountaineer, and *did* not pretend to be one; but his ascent of Mont Blanc gave an impetus to mountain exploration, and, unwittingly, he started the fashion for mountaineering. No sooner did he return to Chamonix than a tourist who was there went off and followed De Saussure's track. He was almost the first of the mountaineering race. The Genevese philosopher ascended the mountain to make physical, meteorological, and geological observations; Colonel Beaufoy went up principally to amuse himself. De Saussure does not, however, seem to have done much in the way of attracting others to Mont Blanc, for very few ascents were made in the twenty-five years following 1787. There was one in 1788, but not another until 1802, and the next one was made seven years later. The Chamoniards, on their part, possibly, were not eager that people should attempt an enterprize which they themselves found was laborious; or, it may be, that preoccupied by matters of greater moment, which affected every hearth in the valley,[1] they paid little attention to affairs that did not promise immediate results, and that this explains why no records relating to the earliest ascents can be found in their archives.[2]

In the twenty-five years after Mont Blanc was conquered there were only half-a-dozen other ascents, and the persons who went up had to be nursed and cared for like so many children. Even the professional guide went about in those days in a fashion which would now be thought absurd. The ice-axe was almost unknown, and when difficulties were met with they had to be avoided, or circumvented. During the lifetime of De Saussure two engravings were

[1] See pages 4, 5.

[2] By the courtesy of M. le Maire, I have been permitted to search the archives, and have not found anything relating either to the first ascents by Jacques Balmat, or the subsequent one by De Saussure.

executed under his direction shewing the manner in which he and his troop of guides went to the Col du Géant and back again. In the one which shews them *descending*, they are not using a rope, and are wandering about like a flock of sheep. The whole of the party are employing alpenstocks—not ice-axes—and for the most part are holding them improperly. They are endeavouring to prop themselves up with them in front, instead of leaning upon them behind, as they should do. M. de Saussure (who is seen on the left) is about to harpoon one of his own feet; and, if he continues to hold the implement in that manner, in the course of the next few yards must infallibly tumble head over heels. De Saussure went about on his mountain expeditions in a long-tailed silk coat, with enormous buttons. The coat which he is said to have worn on his ascent of Mont Blanc is preserved at the family house at Genthod, near Geneva; and, whether it is the identical coat or not, it agrees fairly well with the garment in which he is represented in the engraving.

The sojourn of De Saussure on the top of the Col du Géant,—a *pendant* to his ascent of Mont Blanc, which originated in his desire to complete observations that were left unfinished on the summit of the mountain—was a troublesome, and, for the period, a remarkably adventurous undertaking, which was successfully carried out. Besides the initial difficulty of transporting the food and the means of shelter for a number of persons during a long stay at a considerable elevation, there was the more wearisome business of coaxing his people to remain, and of preventing them from bolting, through *ennui*, from want of occupation.

He started from Chamonix on July 2, 1788, and camped under tent close to the little lake at the Tacul. They continued upwards at 5.30 a.m. on July 3, and at 12.30 arrived at the *cabane* which he had had constructed at the summit of the pass. "*I call this place*," he said, "*the Col du Géant*"—which is something like evidence that he did not know any other name for it.[1] In going to the Col from the Tacul, they did not take the same way as "their predecessors in the previous year," and went by the *eastern* side of the glacier which is now called the Glacier du Géant, or du Tacul, skirting the base of the Aiguille Noire, along extremely steep snow-slopes fringed with crevasses. "Our guides assured us that this way is much more dangerous than that which they had followed in the previous year; but I don't place much dependance upon these assertions, because present danger always appears greater than that which is over, and because they endeavour to flatter travellers by telling them that they have escaped from great perils. Still," he says, "the way by la Noire is actually dangerous; and, as it had frozen in the night, it would have been impossible to have traversed the steep and hard snow, if our people had not gone overnight to make steps, while the slopes were softened by the rays of the sun,"—and this seems to shew that they were not great adepts in the use of the ice-axe. That is all De Saussure says about the passage of the ice-fall of the Glacier du Géant, which always requires skill and caution, and often in these later years taxes the ingenuity of those who pass that way.

[1] Two passages of the Col du Géant were effected in 1787. See chapter xi.



HORACE BENEDICT DE SAUSSURE DESCENDING FROM THE COL DU GÉANT.

Six, eight, or even ten hours are sometimes occupied among the *séracs* of the Géant alone; so that, in taking only seven hours to get from the Tacul to the Col, De Saussure must be regarded fortunate.

Both upon his visit to the Col du Géant, and upon his ascent of Mont Blanc he escaped accident, though his manner of going about was well calculated to lead to trouble. Before 1787 (although he had ascended the Buet), it is probable that he knew nothing from personal experience about concealed crevasses, and the precautions which it is desirable to take in regard to them. There is no indication that he was ever attached to his guides by rope. In speaking of his ascent of the slopes above the Grand Plateau, he said that he got assistance from his guides by a method which appeared to him to be at once the safest for those who are assisted and the least inconvenient for those who assist. "That is, to have a light, but strong bâton 8 or 10 feet long; and two guides, one before and the other behind, holding the bâton by its ends, on the side of the precipice; while you walk between them, with this '*barrière ambulante*' to support you in case of need. This neither bores nor tires the guides in the least, and may afford support to them themselves if one should happen to slip. . . It is in this attitude," he says, "I have been represented by M. le Chevalier de Mechel in the large coloured plate that he has engraved of our caravan."[1] This was his method of insuring himself against slips, or falling into concealed crevasses. It is apparent, however, that the Chamonix guides of his time were acquainted with the use of the rope, and that *they* sometimes attached themselves together, and so averted disaster; though more commonly they merely carried rope about with them, and only brought it into use to repair the results of want of knowledge or stupidity. This is seen from the incident that has already been related, in which Marie Couttet owed his escape to being tied to two of his comrades; but the incident did not make a very deep impression, for on the journey to the Col du Géant no one, apparently, was roped. "All at once," said De Saussure, "we heard cries of '*des cordes, des cordes.*' They were wanted to get Alexis Balmat—one of our porters who was about a hundred paces in advance—out of the bowels of the glacier. He disappeared all at once in the midst of his comrades, swallowed up by a large crevasse, sixty feet deep. Happily, half-way down, he was supported by a mass of snow stuck in the cleft."

[1] This is the engraving entitled 'Horace Benedict de Saussure and his son on the way to the Col du Géant.' De Saussure is shewn between two guides, who are holding the bâton 'on the side of the (five feet high) precipice.' The ladder-bearer leads the way, and is followed by the only man with an ice-axe.

The original Meteorological Observations made by De Saussure on the Col du Géant were published *in extenso* for the first time by his grandson (Henri de Saussure) in the *Mémoires de la Société de Physique et d'Histoire Naturelle de Genève*, in 1891, on the occasion of the centenary of the foundation of the Society. The Memoir has as frontispiece a photographic reproduction of a drawing which is stated to be 'un dessin authentique retrouvé dans les papiers d'H.-B. de Saussure relatifs à cette expédition.' This drawing appears to be a first sketch for the engraved plate, and has numerous differences from it, amongst which it may be mentioned that the ladder-bearer is in the rear, the man with the axe is fourth in line, and M. de Saussure has *not* got the bâton on the side of the precipice.

The engraving in which he is shewn descending is *reversed*, through the drawing having been made the wrong way upon the plate. De Saussure descended the Italian



HORACE BENEDICT DE SAUSSURE AND HIS SON ON THE WAY TO THE COL DU GÉANT.

Nothing need be said about the majority of the ascents of Mont Blanc which were made in the early part of the 19th century. Guides and tourists, alike, were content to follow in the established track; and down to 1819 the only variation that had been made upon the ordinary route was at the commencement of the ascent. Instead of going *viâ* the Montagne de la Côte, the line was taken which it has been customary to follow ever since, by way of the Pierre Pointue and Pierre de l'Echelle; a line that to some extent avoids, though it does not entirely escape, the contorted and riven ice at the 'junction,' which has always been found troublesome.[1] See Illustration upon p. 42.

The next deviation from Balmat's original way was made in 1827, when Sir C. Fellows and Mr. Hawes went from the Grand Plateau to the summit by what is now termed the Corridor route; and, from that time until the ridge of the Bosses was shewn to be practicable, the Corridor route became that which was usually taken. Mr. John Auldjo, who went up Mont Blanc on Aug. 9, 1827, says he crossed the Grand Plateau towards the left, "leaving the old route, which led right across the plain"; and later on, when above the Rochers Rouges, he mentions that he "came again into the old line of ascent, which we had quitted on the Grand Plateau," and says that the new line was first taken "by Messrs. Hawes and Fellows, on the 25th of July last, we having followed the route which these gentlemen had discovered."[2]

Other things happened in the early part of the century which spread the fame of Chamonix and Mont Blanc. Chamonix has always benefited by *publicity*, and Alexandre Dumas gave it greater publicity than anyone had done before his time by the chapters in his *Impressions de Voyage* in which he described the incidents of his visit, and related his interview with Jacques Balmat.[3] Ten years later public attention was again drawn prominently to Chamonix through the observations which were made by Prof. J. D. Forbes when studying the movements of glaciers, and especially by the map of the Mer de Glace that he constructed in connection with his work, which gave to the public, for the first time, an intelligible representation of the renowned glacier and its tributaries.[4] Professor Forbes' observations and experiments

side of the Col. The valley down below on the left should be upon the right of the plate. It is intended to represent the upper end of the Italian Val Ferret.

[1] So recently as 1855, Messrs. Hudson, Kennedy, Ainslie and Smyth, who were amongst the best amateurs of their time, were *unable* to descend from the Grands Mulets to the top of the Montagne de la Côte. "We arrived at a point situated on the edge of the Glaciers des Bossons and Taconnay, and only a few hundred yards from the summit of the Montagne de la Côte, which was just below us. But in each attempt to gain it, were brought up by enormous and impassable crevasses." *Where there's a Will there's a Way*, by the Rev. Charles Hudson and Edward Shirley Kennedy, London, 1856.

[2] *Narrative of an Ascent to the summit of Mont Blanc*, by John Auldjo, Esq.; 8vo, London, 1830, pp. 51, 55. The Hon. Ed. R. Wilbraham, however, stated in the description of his own ascent (made in 1830), that the Corridor route was discovered by Joseph-Marie Couttet.

[3] Dumas visited Chamonix in 1832. M. Venance Payot (son of the Pierre Payot who was the novelist's guide) tells me that the famous interview with Balmat took place at the little Hotel de la Couronne, at the corner of the Place de l'Eglise.

[4] This map remained for twenty years the only accurate one of any portion of the Chain, and it is not yet superseded. His base-line, 2992 feet long, from which his scale was obtained, was measured on the road from Chamonix to Argentière, between the hamlets of les Praz and les Tines.



THE "JUNCTION" OF THE .ACIER DES BO: AND THE GLAC DE TACONNAZ.

were carried on in 1842 between the Montanvert and the Tacul, and his "only assistant was a very intelligent and very worthy guide of Chamouni, Auguste Balmat by name," an exceptional man all round, —a good mountaineer, an excellent guide, and a man of admirable character, who endeared himself to all. He was equally efficient in escorting the Empress Eugénie across the Mer de Glace, or in scaling the highest Alps. From his appearance no one would have suspected him to be an Alpine peasant,—it would have been guessed sooner that he was a doctor, lawyer, or diplomatist. He became the favourite guide of Mr. Alfred (now Mr. Justice) Wills, and died in his arms. It was Auguste Balmat who led the future judge to the summit of the Wetterhorn.



AUGUSTE BALMAT.

But before that stirring episode occurred, another person did more to magnify Chamonix and Mont Blanc than any other who had preceded him. Mr. Albert Smith, a struggling *littérateur*, conceived the idea that an ascent of Mont Blanc, illustrated by dioramic views, might be made an exceedingly popular "entertainment," and he did not deceive himself. So popular did he make it that it would, doubtless, still be running if Albert Smith were still alive. Until *his* time the ascent of Mont Blanc was usually looked upon as a very serious business. Men commonly made wills before starting for it, and wrote heavy accounts of the dangers of the enterprize when they came down. Albert Smith invented a new treatment. In his hands the whole thing was a joke—a piece of sport. He made merry over his troubles, jested at the funny persons he met, and laughed at everything. From the account which he himself has given, it appears that he was smitten with a fancy for Mont Blanc at a very early age. When he was ten years old he had a little book given to him at the Soho Bazaar, called the *Peasants of Chamonix*, which told the story of Dr. Hamel's attempt to reach the summit of Mont Blanc in 1820. On this occasion three lives were lost through disturbing new-fallen snow. This little, twaddly book, which was published for the delectation of children, made a deep impression upon Albert Smith. "I do not think," he said, "that the *Pilgrim's Progress* stood in higher favour with me," and he eventually produced a small moving panorama of the horrors pertaining to Mont Blanc. "This I so painted up and exaggerated in my enthusiasm that my little sister—who was my only audience, but a most admirable one—would become quite pale with fright."

In 1838, when he was twenty-two years old, Albert Smith went to Chamonix, and shortly after his return he thought he "could make

a grand lecture about the Alps. I copied," he said, "all my pictures on a comparatively large scale—about three feet high—with such daring lights and shadows, and streaks of sunset, that I have since trembled at my temerity as I looked at them; and then, contriving some simple mechanism with a carpenter to make them roll on, I produced a lecture which in the town" (Chertsey) "was considered quite a 'hit.' . . For two or three years, with my Alps in a box, I went round to various literary institutions. . . I recall these first efforts of a showman—for such they really were—with great pleasure. I recollect how my brother and I used to drive our four-wheeled chaise across the country, with Mont Blanc on the back seat."



ALBERT SMITH

In 1851 he carried out his long-cherished desire, and attained the summit of Mont Blanc; and nine months afterwards produced at the Egyptian Hall, Piccadilly, an entertainment descriptive of the ascent, which "took the world by storm, and became the most popular exhibition of the kind ever known." The effect was immediate. Whereas in the sixty-four years from 1786 to the end of 1850 there had been only fifty-seven ascents of Mont Blanc, in the six years 1852-57 there were sixty-four ascents. Before 1851 (Albert Smith's year) several seasons often passed without anyone reaching the summit; but since 1851 *no* year has gone by without an ascent being made, or several, or many. This development was, however, at least in part, owing to Chamonix becoming more accessible through the extension of railways; but it is due to Albert Smith to say that his influence

extended much beyond Chamonix and Mont Blanc. Many persons date their first craving for the Alps from the time when they heard this able lecturer and genial showman,[1] and amongst others, I think, some of those who made the first ascent of Mont Blanc 'without guides.'

The first ascent of Mont Blanc *from St. Gervais* was made in 1855 by a party of Englishmen, two of whom (Hudson and Kennedy) published a book in 1856, giving a description of the excursion, under the title *Where there's a Will there's a Way, an ascent of Mont Blanc by a new route and without guides.* They started on the 13th of August, taking six porters and three chasseurs. The porters were sent back when some *cabanes* were reached on the Aiguille du Goûter which had been put up in 1853-4, at a height of about 10,000 feet; and on the 14th they continued upwards to the top of the Aiguille du Goûter and thence to the Dôme du Goûter by the same route that had been taken in 1784, by the chasseurs who were with Bourrit.[2] From the Dôme du Goûter, Hudson and Kennedy's party *descended on to the Grand Plateau*, still accompanied for some of the distance by two of the chasseurs, Cuidet and Hoste, the former of whom pointed out the way to the Corridor;[3] but the remainder of the ascent, and the descent to Chamonix *viâ* the Corridor, Grands Mulets, and Pierre Pointue were made alone. Although this was called 'a new route,' no part of it was new,—the Dôme du Goûter, as we have already seen (p. 17), having been reached from the Chamonix side by Jacques Balmat and his associates in 1786.

It is not very clearly explained in the account which was published about the excursion why this eccentric route was followed; but, from such remarks as are made upon the matter, it seems that the party started with a desire (if not with the intention) to make an ascent by way of 'the Bosses'; and that, on arriving at the foot of the lower Bosse (that is to say, to about the position at present occupied by the Vallot Observatory) they came to the conclusion that the ridge of the Bosses was too much for them. All the party, it is said, especially paid attention to the Bosse du Dromadaire, and their "unanimous strong conviction" was that there was nothing to hinder one from reaching the summit by that way. "We did not, however, try the 'Dromedary's Hump' on this occasion, for the north wind was very strong and cold, and we should have been exposed to its chilling influences for more than two hours. . . Again, as some of the party were obliged to be in England in a few days, we did not like to endanger the success of this their last attempt by

[1] Albert Smith's wine bill has afforded wonder and instruction to more than a generation of tourists. He took 103 bottles of wine and other liquids, and had to pay 50 francs for the amusement of throwing the bottles away. *Vin ordinaire* seems to have cost a franc a bottle in his time, and 'large fowls' 2 francs 75 centimes apiece. Prices have risen.

[2] See page 16.

[3] "The two remaining chasseurs, Cuidet and Hoste, accompanied us for a few hundred yards down the gentle slope which led to the Grand Plateau, and then we halted. Cuidet pointed out two large crevasses at the upper extremity of the Plateau, and told us the Chamonix route lay between them. This information was useful." *Where there's a Will there's a Way*, p. 43.

trying a route which might have ended in disappointment." When upon the summit ridge, two of the party went to its western end and looked down upon the Bosses, "and as the eye hastily surveyed it . . . they could detect nothing to prevent the ascent of Mont Blanc being made by" that way.

The first ascent of Mont Blanc that is known to have been effected by the ridge of the Bosses was made by the Rev. Charles Hudson, with the guides Melchior Anderegg, F. Couttet and others in 1859. Since then, this route has grown steadily in estimation, and at the present time it is perhaps more generally taken than the way by the Corridor. Public opinion, in the course of a century, has declared in favour of the route which was originally proposed, and which was attempted to be followed in 1786 by Jacques Balmat and his associates.

The visit of Napoleon III in 1860, following on the annexation of Savoy, had an important effect on the future of the valley. It drew the largest concourse of people together that has ever been seen at Chamonix, either before or since; and led to the construction of the fine road from le Fayet *viâ* Châtelard and les Montées, which superseded the old and rougher road by way of Servoz, and, by rendering access easier, produced the natural result.

Although it was apparent to Chamoniards by this time (and had been apparent long before) that Mont Blanc was a gold mine for the valley,[1] they did not seem to perceive that there were other mines in the range of a similar nature, which might become equally lucrative. Apart from the experience they gained in crystal hunting and chamois hunting, they had little practice in the higher regions beyond such as it is possible to acquire by crossing the Col du Géant, or upon ascents of the Buet and Mont Blanc; and it is to this circumstance that, so recently as 1860, the majority even of the best Chamonix guides were more dexterous upon snow and ice than upon rocks. Down to 1860, but few of the minor points[2] and none of the highest peaks in the chain of Mont Blanc had been ascended,

[1] It is stated by Capt. M. Sherwill that De Saussure paid his guides, on the ascent of Mont Blanc, *six francs per day*. Sherwill seems to have got the information from one of the Couttets who went with the Professor.

In 1820, the price per guide for Mont Blanc was forty-eight francs. Mr. Jackson, in the account of his ascent made Sept. 4, 1823, mentions that the guides were paid sixty francs apiece. "Upon my return," he says, "I made them a present of an additional five franc piece, with which they were all perfectly content."

By 1851, the 'tarif' had risen to 100 francs per man, and it has remained at that figure ever since.

[2] The Aiguille du Midi was ascended in August, 1856, by Alexandre Devouassoux and Ambroise Simond (guides) and by Jean Simond, a boy of seventeen (porter), who were employed by Count Fernand de Bouillé. Twenty-four mètres below the summit, the Count and the rest of his party were left behind, while the three went up. They were away an hour, and upon returning flatly refused to conduct their employer to the summit. Said Devouassoux, amongst other things, "Monsieur le comte, your flag floats above, the ascent is made; but for all the riches of the world I won't go up again." Said Simond, "There's not one of you capable of going there without losing his life. My spirit may go there perhaps after my death, but my body *never*. The business is over,—no one shall compel me to go there again" (*Les Fastes du Mont Blanc*, par Stéphen d'Arve, Genève, 1876). It was rather hard on the Count, who had taken eight guides and porters, and a miner, on the occasion, and had made several other attempts to ascend the Aiguille.

and no passages were known across the main chain excepting the Cols du Géant, de Miage, and du Tour.[1] The exploration of the little-known parts of the range was mainly effected by the enterprize and through the curiosity of strangers.

In 1861, Mr. Stephen Winkworth effected the first passage of the Col d'Argentière; and in 1863 Messrs. Buxton, George, and Macdonald invented the Col de la Tour Noire, and Messrs. Brandram and Reilly crossed the Col du Chardonnet. The latter excursion was made in connection with the map of Mont Blanc upon which Mr. Reilly was engaged, and the production of this map gave an impetus to the investigation of the chain of Mont Blanc. Both the ends of the chain were little known, and to survey them a certain amount of exploration was necessary. Mr. Reilly invited me to join him in this, and on July 8, 1864, we crossed the Col de Triolet, on the 9th ascended Mont Dolent, on the 12th the Aiguille de Trélatête, and on the 15th the Aiguille d'Argentière.[2] The selection of these points was solely determined by topographical considerations, the aim being to attain prominent positions commanding the least-known parts of the range. In the following year I gave attention to some of the highest points of the chain, and endeavoured to find a pass across the main range, which might compete with or supersede the Col du Géant. On June 24, 1865, I ascended the Grandes Jorasses, on June 26 crossed the Col Dolent, on June 29 ascended the Aiguille Verte, and on July 3 crossed the Col de Talèfre.[3] On July 28 of the same year, my friends Messrs. Buxton, Grove, and Macdonald conquered the Aiguille de Bionnassay; and Mr. Fowler, on Sept. 20, scaled the Aiguille du Chardonnet. The lower peaks have all been ascended since then. The last to yield were the Aiguille du Dru (Sept. 12, 1878), the Aiguille du Géant (July 29, 1882), and the Aiguille Blanche de Péteret (July 31, 1885). Some of these excursions have become pópular. But none of them vie in popularity with le Grand Mont Blanc—the Great White Mountain. Time augments its fame; and, annually, increasing numbers make pilgrimages to its summit, attracted by the striking grandeur of its scenery, from interest in its traditions, and because it is the loftiest mountain in the Alps.

[1] The pass of the Col du Géant is probably the *first* which was effected across the main range of Mont Blanc.

[2] See *Scrambles amongst the Alps*, chapter xi.

[3] *Scrambles amongst the Alps*, chaps. xvi-xix.

TABLE OF ASCENTS OF MONT BLANC SHEWING HOW MANY (STARTING FROM CHAMONIX) HAVE BEEN MADE BETWEEN 1850 AND THE END OF 1903.

	No. of Ascents.		No. of Ascents.		No. of Ascents
To the end of 1850 .	57	To the end of 1868 .	405	To the end of 1886 .	1012
do. 1851 .	58	do. 1869 .	436	do. 1887 .	1059
do. 1852 .	60	do. 1870 .	145	do. 1888 .	1095
do. 1853 .	65	do. 1871 .	456	do. 1889 .	1144
do. 1854 .	83	do. 1872 .	495	do. 1890 .	1196
do. 1855 .	98	do. 1873 .	523	do. 1891 .	1257
do 1856 .	108	do. 1874 .	557	do. 1892 .	1297
do. 1857 .	122*	do. 1875 .	592	do. 1893 .	1361
do. 1858 .	152	do. 1876 .	636	do. 1894 .	1400
do. 1859 .	171	do. 1877 .	662	do. 1895 .	1 84
do. 1860 .	172	do. 1878 .	691	do. 1896 .	1539
do. 1861 .	209	do. 1879 .	722	do. 1897 .	1584
do. 1862 .	231	do. 1880 .	759	do. 1898 .	1678
do. 1863 .	265	do. 1881 .	801	do. 1899 .	1771
do. 1864 .	306	do. 1882 .	843	do. 1900 .	1831
do. 1865 .	341	do. 1883 .	895	do. 1901 .	1888
do. 1866 .	357	do. 1884 .	937	do. 1902 .	1911
do. 1867 .	383	do. 1885 .	956	do. 1903 .	1988

* These figures are taken from the Register kept in the Bureau des Guides, in which the ascents made from Chamonix are supposed to be numbered in rotation. In examining this Register I have noticed an error. Between the years 1857-58 there is a jump from No. 122 to No. 141, that is to say there are no numbers 123 to 140 inclusive. To ascertain the number of Ascents actually upon the Register, eighteen must be deducted. The corrected total, down to the end of 1903, is 1970.[1]

[1] This is the number of Ascents actually upon the Register, but many other ascents have been made both from Chamonix and from St. Gervais which are *not* upon the Register. Sometimes in the Register each individual reaching the summit is reckoned 'an ascent,' and sometimes an entire caravan is put down under a single number. The total 'number of ascents' does not tell the number of persons who have reached the summit.

CHAPTER VI.

A CHAPTER OF ACCIDENTS.

THE *AFFAIRE HAMEL*—ACCIDENT ON THE ITALIAN SIDE OF THE COL DU GÉANT—AMBROISE COUTTET WALKS INTO A CREVASSE—THE DEATH OF MR. YOUNG—CAPT. ARKWRIGHT KILLED BY AN AVALANCHE—MRS. MARKE AND OLIVIER GAY—ELEVEN PERSONS PERISH NEAR THE SUMMIT—DEATH OF PROF. FEDCHENKO—MR. MARSHALL AND JOHANN FISCHER KILLED IN A CREVASSE—PROF. BALFOUR AND PETRUS PERISH ON THE AIG. BLANCHE DE PEUTERET—M. GUTTINGER KILLED BY FALLING ROCKS—THE FATE OF THE ABBÉ CHIFFLET—BRUNOD'S END—LOSS OF COUNT VILLANOVA AND J.-J. MAQUIGNAZ—HERR ROTHE KILLED ON THE PETIT PLATEAU—DEATH OF MR. NETTLESHIP—POGGI SLAIN BY A FALLING STONE—CUMANI DISAPPEARS—DR. SCHNÜRDREHER'S END—THE DEATH OF EMILE REY—'A VERITABLE SUICIDE'—DEATH OF MR. BINNS AND X. IMSENG—FATAL ACCIDENT ON THE MONTAGNE DE LA CÔTE—KILLED BY LIGHTNING—ANOTHER DEATH FROM FALLING STONES—A *MAUVAIS PAS*—THREE OUT OF FOUR LOSE THEIR LIVES.

MONT BLANC was free from accidents until 1820, and then three Chamoniards lost their lives while conducting Dr. Hamel by the, at that time, usual route. There is little in this matter to distinguish it from a number of similar occurrences which have happened subsequently on Mont Blanc and elsewhere, but from the almost romantic circumstances under which the remains of the victims came to light, after having been entombed more than 40 years in the ice, the *affaire Hamel* has attained an unusual degree of notoriety.

The Hamel accident (1820).—Dr. Hamel started from Chamonix on August 18, 1820, with two young Englishmen (Messrs. Dornford and Henderson), to make an ascent of Mont Blanc. They were detained on the 19th at the Grands Mulets by bad weather, and during that day a considerable quantity of snow seems to have fallen on the upper part of the mountain, though not down below. By 8.20 a.m., on the 20th, they got to the Grand Plateau; at 9 they continued the march; and at 10.30 they were somewhere upon the '*ancien passage*,' above the level of the Dôme du Goûter (14,210 feet), and not much below the top of the Rochers Rouges, mounting in zigzags to avoid crevasses, and to ease the gradients. From the several accounts which have been rendered,[1] it would appear that at the

[1] One by Mr. Dornford in the *New Monthly Magazine*, and another by Dr. Hamel in the *Bibliothèque Universelle*, both written and published shortly after the occurrence; and two others by Joseph-Marie Couttet, the principal guide, more than forty years later. There are many differences in these narratives.

moment of the accident a guide named Auguste Tairraz was leading, and cutting or making steps, followed by four others, Pierre Carrier, Pierre Balmat, Julien Devouassoux, and Joseph-Marie Couttet. Half-a-dozen paces behind came the three tourists with three more guides. They had just faced about, and were going obliquely across the slope, making a deep groove in the newly-fallen snow. Mr. Dornford says[1]:—

"As we were crossing obliquely the long slope above described, which was to conduct us to the Mont Maudit,[2] the snow suddenly gave way beneath our feet, beginning at the head of the line, and carried us all down the slope to our left. I was thrown instantly off my feet, but was still on my knees and endeavouring to regain my footing, when, in a few seconds, the snow on our right, which was of course above us, rushed into the gap thus suddenly made, and completed the catastrophe by burying us all at once in its mass, and hurrying us downwards towards two crevasses about a furlong below us, and nearly parallel to the line of our march. The accumulation of snow instantly threw me backwards, and I was carried down, in spite of all my struggles. In less than a minute I emerged, partly from my own exertions, and partly because the velocity of the falling mass had subsided from its own friction. I was obliged to resign my pole in the struggle, feeling it forced out of my hand. A short time afterwards, I found it on the very brink of the crevasse. This had hitherto escaped our notice, from its being so far below us, and it was not until some time after the snow had settled, that I perceived it. At the moment of my emerging, I was so far from being alive to the danger of our situations, that on seeing my two companions at some distance below me, up to the waist in snow, and sitting motionless and silent, a jest was rising to my lips, till a second glance showed me that, with the exception of Mathieu Balmat, they were the only remnants of the party visible. Two more, however, being those in the interval between myself and the rear of the party, having quickly reappeared, I was still inclined to treat the affair rather as a perplexing though ludicrous delay, in having sent us down so many hundred feet lower, than in the light of a serious accident, when Mathieu Balmat cried out that some of the party were lost, and pointed to the crevasse, which had hitherto escaped our notice, into which, he said, they had fallen. A nearer view convinced us all of the sad truth. The three front guides, Pierre Carrier, Pierre Balmat, and Auguste Tairray, being where the slope was somewhat steeper, had been carried down with greater rapidity and to a greater distance, and had thus been hurried into the crevasse, with an immense mass of snow upon them, which rose nearly to the brink. Mathieu Balmat, who was fourth in the line, being a man of great muscular strength, as well as presence of mind, had suddenly thrust his pole into the firm snow beneath, when he felt himself going, which certainly checked, in some measure, the force of his fall. Our two hindermost guides were also missing, but we were soon gladdened by seeing them make their appearance, and cheered them with loud and repeated hurrahs. One of these, Julien Devouassoux, had been carried into the crevasse, where it was very narrow, and had been thrown with some violence against the opposite brink. He contrived to scramble out without assistance, at the expense of a trifling cut on the chin. The other, Joseph Marie Couttet, had been dragged out by his companions, quite senseless, and nearly black from the weight of snow which had been upon him. In a short time, however, he recovered. It was long before we could convince ourselves that the others were past hope, and we exhausted ourselves fruitlessly, for some time, in fathoming the loose snow with our poles. . . The first few minutes, as may

[1] In the *New Monthly Magazine*.

[2] This is a mistake,—they were not going near Mont Maudit. Mr. Dornford probably meant "going towards, or in the direction of" Mont Maudit.

be readily imagined, were wasted in irregular and unsystematic attempts to recover them. At length, being thoroughly convinced, from the relative positions of the party when the accident happened, that the poor fellows were indeed in the crevasse, at the spot pointed out by Mathieu Balmat, the brother of one of them—in our opinion, only one thing remained to be done, and that was to venture down upon the snow which had fallen in, and, as a forlorn hope, to fathom its unknown depths with our poles. After having thus made every effort in our power for their recovery, we agreed to abandon the enterprise altogether, and return to the Grand Mulet. The guides having in vain attempted to divert us from our purpose, we returned to the crevasse, from which, during the consultation, we had separated ourselves to a short distance, and descended upon the new-fallen snow. Happily it did not give way beneath our weight. Here we continued, above a quarter of an hour, to make every exertion in our power for the recovery of our poor comrades. After thrusting the poles in to their full length, we knelt down, and applied our mouth to the end, shouting along them, and then listening for an answer, in the fond hope that they might still be alive, sheltered by some projection of the icy walls of the crevasse; but, alas! all was silent as the grave, and we had too much reason to fear that they were long since insensible, and probably at a vast depth beneath the snow on which we were standing. We could see no bottom to the gulf on each side of the pile of snow on which we stood; the sides of the crevasse were here, as in other places, solid ice."

It is not possible to tell, from the narratives of this affair, where the avalanche was started. Mr. Dornford mentions being hurried 'downwards towards two crevasses about a furlong below.' Joseph-Marie Couttet in one of his accounts says that he was carried two hundred mètres below some of the others; and in another place he speaks of going down four hundred feet in a minute, and then of flying through the air. The probability seems to be that the five guides who were in front were carried a considerable distance down the slope and then shot over the ice cliffs, which are seen near the bottom of the engraving upon page 20,[1] and that the tourists and the three other guides did not go over the cliffs.[2] The three leading men were lost, and completely buried up in the crevasse by the snow which they had dislodged; and Joseph-Marie Couttet and Julien Devouassoux very narrowly escaped the same fate. The former is said to have been nearly black in the face when he was dragged out.

Ten years later, when conducting Mr. Wilbraham by the 'corridor' route, Couttet pointed in the direction of the crevasse which had nearly swallowed him up, and said, "Ils sont là." "It was a melancholy reflection," remarked the tourist, "and all the guides seemed to feel deeply the loss of their ill-fated comrades; who will in all probability remain imbedded beneath the Grand Plateau till the day of judgment." But at that time (1830), the bodies were no doubt already a considerable distance from the spot where the accident occurred, for the dismembered remains of the three unfortunates commenced to re-appear at the *lower* end of the Glacier des Bossons in 1861, more than four miles away, in a direct line, from the place

[1] In this engraving, the '*ancien passage*' is upon the right hand. The view was taken from the Refuge Vallot.

[2] The late Mr. J. J. Cowell, who interviewed J.-M. Couttet, says (*Alpine Journal*, vol. i, p. 333) that he was positive the whole party was carried down no less than 1200 feet. This agrees with Mr. Dornford's statement that, before the avalanche was started, they had got higher than the Dôme du Goûter.

where they perished, and must have travelled downwards, on an average, at the rate of 500 feet per annum.

"Ah! I never could have thought," said Joseph-Marie, who was still living when these vestiges of the catastrophe were discovered, "Who would have thought that I should have shaken the hand once more of my brave comrade, the *pauvre* Balmat!" Fragments of skulls (one of which was identified as that of Pierre Balmat), a lower arm with its hand, fragments of knapsacks, a felt hat (worn by Pierre Carrier), a crampon, a tinware lantern, shreds of clothing, and a cooked leg of mutton, were amongst the objects which came to light first; and in 1862 a multitude of other articles which were collected placed it beyond all doubt that these were indeed relics of the long-lost victims of the *affaire Hamel*. The major part of the remains were interred, with ceremony, at Chamonix, but some few were incorporated with the Museum at Annecy.

Accident on the Italian side of the Col du Géant (1860).— The next disaster in the range of Mont Blanc occurred on the 15th of August, 1860, and caused the death of three Englishmen and a Chamonix guide. The cause was more or less obscure. Two guides escaped, and were the only persons who could speak about it; and, as there were certain circumstances which were not to their credit, one can understand their reticence. The points that appear certain are that the party arrived at the summit of the Col at a late hour of the day, and when descending to Courmayeur took to a snow-slope by the side of the rocks which are usually followed. A guide led and another brought up the rear, *holding* the rope by which the others were attached; and, when a slip occurred, they let go the rope. "All that is known to the public is that the two men who led and followed the party let go the rope and escaped, while the three Englishmen and Tairraz went to destruction. Tairraz screamed, but, like Englishmen, the others met their doom without a word of exclamation."[1] There is no obscurity about the accident which comes next in chronological order.

Ambroise Couttet walks into a crevasse (1864).— Two Austrian gentlemen had made a successful ascent of Mont Blanc on August 9, and were descending to the Grand Plateau. "A young porter, Ambroise Couttet, was some distance in front, not attached to the rope. He took a direction too near the edge of the plateau; and, just as the guide of the party shouted to warn him of his danger, he was engulfed in a crevasse, before the eyes of the others. The crevasse was 90 feet of sheer depth, and the rope was not long enough to reach the bottom." Two following parties gave the use of their ropes. "The guides approached the edge of the crevasse and leant over. They saw the traces of the man's fall, and called, but received no answer. The cold on the plateau was intense, and the guides feeling convinced that the man was dead continued their route.

"The same evening a party of guides left Chamouni to recover the body. Two, whose names should be mentioned, Michel Payot and

[1] *Hours of Exercise in the Alps*, by John Tyndall, 1871, p. 23.

Simon Pierre Benoît, descended 90 feet to the turn of the crevasse, but could get no further from the badness of the air (?). They lowered a bottle 100 feet more, which came up covered with hair (?). There is now no hope of recovering the body."[1] *Alpine Journal*, vol. i, p. 384, quoted from a letter published in the *Times*.

The death of Mr. Young (1866).—"On the 23rd of August, 1866, Sir George Young and two of his brothers reached the summit of Mont Blanc without guides, and at about 11.30 a.m. prepared to descend. They had ascended by the Bosse, and in passing the point where the route of the '*ancien passage*' lay immediately below them they descended a little, in order to look for tracks in that direction. They soon, however, discovered that the whole surface in that direction was hard and icy, and that they must retrace their steps, and continue along the summit ridge towards the usual line of descent to the Mur de la Côte. In turning, one of the brothers slipped, and dragged the others down with him. They slid for some distance, fell over a precipice some 15 or 20 feet high, slid again a little way farther, and were then stopped by the soft snow. Sir George and one of his brothers were unhurt by their fall, but the youngest unhappily pitched on his head and broke his neck." *Alpine Journal*, vol. ii, p. 382. This lamentable affair was followed shortly afterwards by another and more disastrous one.

Captain Arkwright and three others killed by an Avalanche (1866).—"On the 13th of October, 1866, Captain Arkwright, with his guide Michel Simond, two porters, François and Joseph Tournier, and accompanied by Silvain Couttet of the Pierre Pointue and a servant from one of the Chamonix hotels, both of whom were apparently volunteers, left the Grands Mulets at 5.30 a.m. They took the route of the '*ancien passage*,' and had ascended a little way, when an avalanche fell from above. Couttet saw what was coming, and, along with the servant, managed to get out of the way. Captain Arkwright and his guides either remained immovable, or tried to escape in the wrong direction: they were overwhelmed by the avalanche, and no trace of them was discernable by the survivors."[2] *Alpine Journal*, vol. ii, pp. 383-4.

Avalanches of the description that destroyed this party fall frequently from the ice-cliffs which are partially shewn on the right hand of the engraving on page 20, and their *debris* sometimes extends quite one-third way across the Grand Plateau. While ascending by the *ancien passage*, there must always be some risk from them.

[1] Michel Payot, who is still alive and on the active list of guides, was awarded a *médaille d'honneur* and a diploma by the Ministry of the Interior for his meritorious conduct on this occasion. A few weeks earlier, he had been travelling with Mr. Adams-Reilly and myself. See *Scrambles amongst the Alps*, chap. xi.

[2] A long account of this affair is given in *Oscillations des quatre Grands Glaciers*, by Venance Payot, 1879; from which it appears (amongst other differences from the account in the *Alpine Journal*) that the body of François Tournier *was* discovered by Sylvain Couttet among the blocks of ice on the Grand Plateau, before he descended; and that the bodies of the two other Chamoniards were recovered at a later date. A fresh avalanche of a similar nature stopped the search. The body of Capt. Arkwright was not found until Aug. 1897, on the lower part of the Glac. des Bossons. His watch and other articles were discovered in May-June, 1899.

Loss of Mrs. Marke and Olivier Gay at the top of the Corridor, at the beginning of **Aug. 1870.**—Mr. and Mrs. Marke set out with Miss Wilkinson and two Valaisan guides to make the ascent of Mont Blanc. They took a youth as porter at the Grands Mulets, named Olivier Gay. At the top of the Corridor the ladies were fatigued, and remained behind with the porter, while Mr. Marke and the guides continued the ascent. The latter were half way up the Mur de la Côte when they heard piercing shrieks, and returning with all haste found that Mrs. Marke and Olivier Gay had disappeared in a crevasse. The ladies had been unable to bear the cold, and wished to move about. The porter offered his arm to Mrs. Marke, and very shortly afterwards both broke through a snow-bridge and were swallowed up in a crevasse. The bodies were not recovered.

The Editor of the *Alpine Journal* made the following comments on this occasion. "The porter gives one lady his arm, and walks across a snow-field notoriously full of crevasses. The catastrophe which occurred was that which every experienced traveller would have predicted as highly probable. I will not enquire whether, in this case, any blame attaches to the traveller; but it is difficult to imagine that anyone with the slightest pretensions to act as *guide* could have committed the folly to which it was owing that the porter lost his own life and that of his companion." *Alpine Journal*, vol. v, p. 190.

Eleven persons perish near the Summit (1870).—This catastrophe was the worst thing of its kind that has happened on Mont Blanc. The entire caravan of eleven persons perished. The victim tourists were unknown at Chamonix; there was no one interested in writing an account of this ghastly affair, and anything like one can only be constructed by reference to a diversity of sources.

On August 26, 1870, two Englishmen (Messrs. Stogdon and Marshall) came down to Chamonix, having escaped, so to speak, by the skin of their teeth from being lost on the summit of Mont Blanc. They had ascended by the ridge of the Bosses, and intended to come back another way. Being caught in bad weather they returned in their track, through inability to descend in any other direction. It was a narrow shave. Their two guides, though not in their first youth or gifted with great agility, were sturdy men—seasoned vessels. One of them, Moritz Andermatten, had been up Mont Blanc sixteen times. The other was Peter Taugwalder, *père*, of Zermatt. "On the night of our return," said Mr. Stogdon, "an American gentleman named Randall asked me to let him come into our sitting-room and talk over Mont Blanc. The consequence was I did not get to bed till two. I found in Mr. Randall, in spite of his fifty years, the most intense mountain enthusiast I ever had the pleasure of meeting. . . To see, not necessarily to climb Mont Blanc had been the dream of his life, and he had come over at last to fulfil it." The story he listened to seems to have had a stimulating rather than a deterrent effect, and the next Mr. Stogdon heard of Mr. Randall was that he, along with ten others, perished close to the top of the mountain, early in the following month.

Mr. Randall, apparently, met casually at Chamonix another American, Mr. J. Bean, and the Rev. G. McCorkindale. It does not seem that any one of the three had mountain experience. They determined, however, upon an ascent of Mont Blanc, and setting out on September 5, with three guides and five porters, passed that night at the inn on the Grands Mulets.[1] The next day several persons in the Valley of Chamonix endeavoured to watch their progress through telescopes. The weather aloft was bad. The wind is said to have been frightful. Even from below the snow was seen whirling about. In an opening in the clouds, about 2.15 p.m., the whole eleven were caught sight of for a short time near the rocks called the Petits Mulets,[2] and it was noticed from time to time that they had to throw themselves down to escape being carried away by the wind. A little later the clouds again parted, and they were perceived coming down near the same place. After that nothing more was seen of the top of the mountain for eight days.

No one returned, and on the 7th fourteen Chamoniards started, to try to learn something, but they did not even reach the Grands Mulets. Snow was falling heavily 2000 feet lower down, and drove them back. On the 15th the weather began to clear, and five black dots were discovered a little to the left of the Petits Mulets. Twenty-three men set out from Chamonix the next day, and on the 17th found Mr. McCorkindale and two of the porters 750 feet below the summit, lying, so they expressed it, here and there, with their heads right way uppermost, but with their clothes somewhat torn, as if they had slipped and fallen. About three hundred feet higher they came upon Mr. Bean and another porter, sitting down, the former with his head leaning on one hand and the elbow on a knapsack; ropes coiled up, bâtons, axes, and knapsacks round about them, one still containing some meat and bread and cheese. Upon Mr. Bean a note-book was found containing the following entries, and little except conjectures can be added to the information they give.

Tuesday, September 6. Temperature 34 deg. F., at 2 a.m.[3] I have made the ascent of Mont Blanc with ten persons; eight guides, Mr. McCorkindale, and Mr. Randall. We arrived on the summit at half-past two. Immediately after leaving it I was enveloped in clouds of snow. We passed the night in a grotto excavated out of the snow, affording very uncomfortable shelter, and I was ill all night.

Mont Blanc, September 7. If any one finds this note-book, I beg that it may be sent to Mrs. H. M. Bean, Jonesborough, Tennessee, United States of America.

My dear Hessie,—We have been on Mont Blanc for two days in a terrible snowstorm. We have lost our way and are in a hole scooped out of the snow at a height of 15,000 feet. I have no hope of descending. Perhaps this book

[1] As it was late in the season, the servants at the Grands Mulets had already come down.

[2] For the position of the Petits Mulets, see the view of Mont Blanc from the Brevent, facing page 104.

[3] The entry 'Temperature 34 deg. F., at 2 a.m.' was doubtless made at the Grands Mulets before departure. All the rest seems to have been written on the spot where he was found. The concluding paragraph, perhaps, should have been dated September 8.

may be found and forwarded. (Here followed some instructions on private affairs.) We have no food; my feet are already frozen, and I am exhausted; I have only strength to write a few words. I die in the faith of Jesus Christ, with affectionate thoughts of my family; my remembrances to all. My effects are in part at the Hotel Mont Blanc, and partly with me in two portmanteaux. Send them to the Hotel Schweitzerhof at Geneva; pay my bills at the hotel, and heaven will reward your kindness.

And lower down, in nearly illegible writing:—

Morning. Intense cold: much snow, which falls uninterruptedly; guides restless.

All the five corpses were hard frozen. They were put into sacks, and dragged down the glaciers. It took three days to transport them to Chamonix. The bodies of the six others have not been discovered. Mr. McCorkindale was buried in the graveyard of the Parish Church, and bits of heather find their way from time to time to the tomb of a man who was greatly beloved.[1]



GRAVE OF REV. GEORGE MCCORKINDALE.

In referring to this tragedy, Mr. Leslie Stephen remarked, "With a really experienced guide, I cannot but believe that the party who were lost must have been able to find their way. They might have suffered frost-bites, or even lost the lives of some of the weaker members of the party; but that eleven men should be so bewildered as actually to be incapable of discovering a route, implies a singular want of that instinct for which a good guide is generally remarkable, and which all tolerable guides ought to possess." While concurring with Mr. Stephen's remarks, I think it is not at all unlikely that the whole of the party *were* badly frost-bitten, and from that cause were *unable* to proceed.

The death of Professor Fedchenko by the side of the Glacier du Tacul in 1873, when upon an ordinary excursion to the Col du

[1] Mr. Bean is buried near Mr. McCorkindale. The following inscription is over his grave. James G. Bean of Batt=Md. U.S. of America.—Perished near the summit of Mount Blanc about the 7th of September, 1870, aged 54.—On his person was found a diary and among the last words which he pencilled to his wife were these: "I die in good faith in Jesus Crist and hope we will meet in heaven."

Géant, was a deplorable occurrence, arising from the tourist being unable to withstand bad weather, at a low level, even for a single day. An undue disposition was shewn at the time to throw blame upon a Chamonix guide and porter who accompanied him.[1] Fedchenko was a man of middle age, who had been in Central Asia, and acquired there some experience in mountain-travel; and he was strong in appearance, but he was evidently without much stamina. The guide—Joseph Payot—was a young man, between 23 and 24 years of age; the porter, his brother Prosper, was between 22 and 23.

"M. Fedchenko started from Chamonix at 5 a.m., intending to visit the col and return the same evening. He breakfasted at the Montanvert, whence he set forth at 8 a.m. He there procured his provisions, for which, with his breakfast, he paid 26 francs. The party took the ordinary route, and reached the snow slopes about the *séracs* without any unusual incident. The passage of the *séracs* always involves a good deal of close attention to details, and it was only on reaching the *névé* above that they noticed that the day, which, when they started from the Montanvert, was exceptionally fine, was clouding over. They did not, however, anticipate any very severe weather, and pursued their way; but when they had nearly reached the rocks known by the name of 'La Vierge,' from which it would have taken them, under ordinary circumstances, about an hour to reach the col, a storm of wind, rain, sleet, and snow burst upon them with extreme suddenness and violence. Their first idea was to push on, cross the col, and reach Mount Fréty on the southern side; but a very few minutes sufficed to show them that it was hopeless to attempt in such weather to toil up the heavy snow slopes which lead to the col, added to which the storm prevented them from telling in what direction they were going, and the chances were greatly against their hitting the place of passage even if they could breast the ascent. They turned, a little after 2 p.m., to retrace their steps. The tracks they had made in the snow were already obliterated, and were never found again, except here and there in the middle of the descent of the *séracs*. They were soon wet to the skin and half frozen by the cold wind. M. Fedchenko was already tired, and the cold and wet told heavily upon him. Partly in consequence of his exhausted state, partly in consequence of the mist and drift in which they were enveloped, and which prevented them from seeing any distant object by which to direct themselves, they were a long time in reaching and again in descending the *séracs;* and it was necessary to give an increasing amount of help to the traveller, who was not a light man. By the time they arrived at the foot of the *séracs* it was nightfall—the day was the 14th of September—and by this time M. Fedchenko was so exhausted that the two Payots had to carry him on their backs, turn and turn about. . . About 9 p.m. they reached the few scattered rocks which compose the moraine known as La Noire—a moraine totally insufficient in size to afford any protection against the weather, but which still gave them rock instead of ice to rest upon. By this time Joseph Payot, who is the less strong of the two brothers, was almost as exhausted as M. Fedchenko, and was himself unable to proceed further. They remained in this dreadful position, exposed, without any shelter, to wind, rain, and snow from 9 p.m. to 2 a.m. There was no moon, and the night was dark, with clouds and bad weather. Prosper Payot, who was the strongest of the party, remained upon his feet all the time, moving about, and, as long as he could, he kept his brother and the traveller upon their feet; but at length exhaustion became supreme. The traveller sank upon the rock, and despite every effort Prosper could make, fell into that fatal sleep of frozen exhaustion from which there is no awaking. He had long been in this condition, though

[1] Taking their youth and inexperience into account they appear to have behaved remarkably well.

still breathing, and Prosper had already had to strike, kick, and shake his brother to prevent him also from falling asleep, when the younger brother came to the conclusion that the only chance of saving any life besides his own—perhaps his own also—was to attempt to walk on. He got his brother into motion with infinite difficulty, and with great difficulty kept him from falling, till, little by little, circulation and warmth to some degree revived, and between 4 and 5 a.m. on the 15th they both reached the Montanvert in a very exhausted and pitiable condition. . . It is difficult to see what more the two men could have done after they once became involved in the difficulty, or of what avail it would have been to stay longer on the glacier than they did. It is true that the narrative comes from the men themselves; but I see no reason to doubt it. The story was told me by Prosper Payot simply, quietly, and modestly; and there are many circumstances to bear it out." *Alpine Journal*, vol. vi, pp. 308-9, (letter from Mr. Justice Wills).

Mr. J. G. Marshall, and the guides **Johann Fischer,** of Zaun near Meyringen, and **Ulrich Almer** of Grindelwald, while descending the **Brouillard Glacier** by moonlight on **Sept. 1, 1874,** broke through a snow bridge near the edge of the glacier, and fell into a crevasse. The two former were killed. Almer escaped with slight injuries. Mr. Leslie Stephen, who examined the place with Melchior Anderegg shortly after the accident, said—

"that the crevasse into which they fell was not five minutes' walk from the moraine. Fischer was leading, and Almer was last, and just after a question and the answer that it was almost midnight, a bridge of *firn* or *nêvé* broke below their feet, and all three fell almost simultaneously into the schrund. The bridge must have been 20 feet wide, and presented no sign of its presence beyond a small hole by which Almer afterwards escaped, and it would not suggest to them any doubt of its stability. Mr. Marshall and Fischer fell about 30 feet into the lower part of the crevasse, which may have been 5 feet wide, and upon hard ice. Mr. Marshall's skull was fractured and his death instantaneous; and Fischer's injuries were such that he could not have lived many minutes. Almer seems to have fallen a less distance upon a kind of bank or shelf, which made up the greater part of the profile of the schrund and upon snow; possibly too his fall was broken by the fragments of the bridge which fell under him. Then he was probably dragged by the rope into the deeper part after the others."

The next catastrophe also occurred on the south side of Mont Blanc, in July, 1882.

Prof. F. M. Balfour, of Cambridge, when attempting to climb the Aiguille Blanche de Peuteret, was killed along with his guide **Johann Petrus,** of Stalden. The exact cause of the accident was not ascertained. Mr. C. D. Cunningham, who was in the neighbourhood at the time, said that—

"On the 11th inst. Mr. Balfour crossed the Col du Géant, and in descending the Italian side the idea first occurred to him of attempting the Aiguille Blanche de Peuteret. . . This peak, which had never been ascended, is a part of one of the buttresses of Mont Blanc, and is joined to the *massif* of the mountain by an extremely steep snow arête. My guide Emile Rey had previously attempted the peak, and was able to give Mr. Balfour so many details as to the probable line of ascent that he proposed that we should both accompany him. This Emile strongly advised me not to do, as he considered the snow to be in a dangerous condition. Mr. Balfour, however, did not agree with him as to the state of the snow, and next morning started

with Petrus for the Aiguille, accompanied by a porter to carry blankets and wood as far as their sleeping place on the rocks.

"This was on Tuesday, the 18th, and as it was a new ascent and a difficult one, it was thought probable he might be absent two nights, and return to Courmayeur on Thursday afternoon. As he did not reappear, it was supposed that he must have crossed Mont Blanc to Chamonix, or, having found the ascent more difficult than he expected, gone down to the Châlets de Visaille for more provisions. On Friday Mr. Bertolini and Mr. W. M. Baker, an Englishman who was staying in the hotel, became seriously alarmed. Finding on Saturday he had not been heard of either at Chamonix or the Châlets de Visaille, they sent out a search-party, accompanied by the honorary chaplain, the Rev. H. S. Verschoyle, there being some hope of the poor men being still alive. Early on Sunday morning, on reaching the rocks between the Glacier du Brouillard and the Glacier du Fresnay, they saw what appeared to be the bodies of Mr. Balfour and Petrus, both partially covered with snow. . . It is clear that Mr. Balfour's death was instantaneous. As there was a comparatively small quantity of fresh snow about the place where they lay, we presume that it was not an avalanche which caused their death, but that one of them slipped, and the other had not sufficient strength to hold his companion. As the provisions which they had left at the sleeping place were untouched, the accident must have taken place on Wednesday, the 19th, just a week ago. But it is not certain whether they fell in the descent or ascent of the Aiguille." *Alpine Journal*, vol. xi, pp. 90-91.

In a communication to the *Alpine Journal* by Mr. Walter Leaf, it was stated that "Mr. Balfour's neck was broken and his skull fractured in three places. Petrus's right arm was broken between the elbow and the shoulder, and so were his ribs on the right side; a fracture of the skull was, in his case, probably received during the very difficult and dangerous descent of the bodies to Courmayeur. Both showed some bruises and abrasions, but no other serious external wound; their hands were scratched only on the outside, so that they could have made no effort to save themselves by grasping anything. The clothes were torn, but not to any great extent; nor was the rope broken. These appearances seem to point to a fall over rocks, but through a comparatively small height."

M. Guttinger, of Geneva, was killed by falling rocks on the Grandes Jorasses, on July 11, 1884. It is said that he started "from Courmayeur accompanied by the guides J. M. Rey and Julien Proment, to sleep at the hut on the Grandes Jorasses, intending to complete the ascent next day. About 4 p.m. the party came to a *couloir* of about 65 feet, which had to be ascended in order to gain the shelf on which stands the hut. . . The guides resolved to go up by the rocks and to let down a rope by which the traveller could mount without touching the ice. They warned M. Guttinger to shelter himself under an overhanging rock," lest stones might "fall upon him while they were climbing up. M. Guttinger took this advice, and Rey, aided by Proment, began to climb the rocks; but seeing his traveller leaving his shelter to see how the obstacle was being overcome, Proment called out to him to go back. The unfortunate traveller is stated to have replied that he was too curious to see how the guides were getting on to allow him to do so. Rey went on climbing up, when a stone began to move, carried others with it, and all fell down

towards M. Guttinger, who, despite the efforts of Proment, was not able to get out of the way, and was struck by huge blocks on the head, shoulder, and right leg. His guides managed to carry him down some way, and Rey then went off to get help. Proment remained with the injured man, who was able to converse, and who, though very much hurt, did not seem in immediate danger. But very suddenly, about 9 p.m., he made an attempt to speak, and immediately breathed his last."[1] *Alpine Journal*, vol. xii, pp. 108-9.

The Abbé Chifflet (bursar of the Carthusians at Lyons), who was **killed on the eastern slopes of Les Courtes, in July, 1885,** may, like M. Guttinger, be said to have courted his fate. He left the Châlet of Lognan on July 4, with two guides, Joseph and Clément Devouassoux (father and son), to cross from the upper basin of the Argentière Glacier to the Glacier de Talèfre. Their non-arrival either at the Montanvert or at Lognan raised doubts, and on July 8 a party of guides went in search, and discovered all three, lying dead upon the Glacier d'Argentière. "The Abbé and the elder guide were still roped together, though their bodies were much mutilated; the younger guide, with a fragment of rope still round him, lay about forty yards off." The evil character of the ridge they proposed to cross was well known.

Gratien Brunod, a guide of Courmayeur, **lost his life on Aug. 12, 1890, at the top of the Col du Géant.** He was accompanying two members of the Italian Alpine Club across the pass; and, whilst they were resting on the top, he went aside to get some water a few yards from the cabane, slipped and fell for about a thousand feet down a *couloir* on to the Glacier de Toule, and was killed on the spot.

Count Umberto di Villanova, with his guides **Jean-Joseph Maquignaz** and **Antonio Castagneri, disappeared** in **August, 1890,** somewhere on the ridge which connects the **Dôme du Goûter** with the **Aiguille de Bionnassay.** This party left the Châlet of la Visaille (near the foot of the Italian Glacier de Miage) on August 18, intending, it is supposed, to ascend Mont Blanc by the Dôme route. Since that time they have not been heard of. Shortly after they left, a furious storm broke on Mont Blanc, and blotted them out. For some days their disappearance was not noticed, and, as bad weather continued, no search could be made for a long time. Then prolonged efforts were made to ascertain their fate. Their tracks were discovered, and followed up to the ridge at the head of the Glacier du Dôme, which connects the Dôme du Goûter with the Aiguille de Bionnassay, and there they ceased. What happened there is unknown. The ridge has exceedingly steep slopes upon each side. Anything falling down them would go a thousand feet at a stride, and impetus would perhaps carry it a thousand feet further. Some of the Val Tournanche men who were in the searching parties thought that the

[1] It was stated in the *Echo des Alpes* that M. Guttinger was "très fort, très ferme, intrépide, agile sur le rocher, solide sur la neige et la glace, sérieux, et *surtout prudent*."

Count must have slipped, and others consider it is not unlikely that the whole were blown off the ridge in a squall. Down below, on one or the other side, this unhappy party lies buried; and at some future date their remains will no doubt be discovered, either upon the Italian Glacier de Miage, or upon the Glacier de Bionnassay.[1]

Herr Rothe and Michel Simond killed on the Petit Plateau by an ice-avalanche (Aug. 21, 1891).

"On August 20 a party consisting of Herr Rothe of Brunswick, Count de Favernay, three guides, and two porters reached M. Vallot's hut" (observatory) "on the Bosses du Dromadaire. The weather the following morning did not allow them to complete the ascent of Mont Blanc, and in the afternoon of the 21st they began the downward journey. Their party was increased by four of the men[2] employed in connection with M. Janssen's proposed observatory. As they descended from the Grand towards the Petit Plateau a mass of ice and snow falling from the Dôme du Goûter started an avalanche, which caught those in rear and swept five of them—Herr Rothe, his guide Michel Simond, the porter Armand Comte, Count de Favernay, and one of his guides into the great crevasse. All but the first two were extricated, Comte with serious injuries, but the bodies of Herr Rothe and Simond were only recovered a few days later." *Alpine Journal*, vol. xv, pp. 539-40.

Ice-avalanches frequently fall from the ice-cliffs of the Dôme du Goûter on to the Petit Plateau, but they seldom if ever *extend right across it*: and the proper course to adopt, when crossing the Petit Plateau, is to sweep round to the east and get as far as possible away from the Dôme du Goûter.

Dr. Jacottet, of Chamonix, died rather suddenly at the Vallot Observatory on **Sept. 2, 1891**, under the circumstances mentioned upon page 73. Dr. Egli-Sinclair, of Zurich, writing in the *Annales de l'Observatoire Météorologique du Mont Blanc*, 4to, Paris, 1893, p. 121, attributes his death to *Mal de Montagne*.[3]

The death of Mr. Nettleship (1892).—Mr. Richard Lewis Nettleship, tutor of Balliol College, Oxford, left Chamonix on August 23, 1892, for the Col de Voza, intending to ascend Mont Blanc by way of the Aiguille du Goûter and the Bosses du Dromadaire. He took as guides Alfred Comte and Gaspard Simond. They left the Col de Voza at 4 a.m. on the 24th, but did not reach the Aiguille du Goûter until 1 p.m. Though the morning was fine, clouds gathered, and there were indications of bad weather, before mid-day. The party, however, continued upwards, intending to stop for the night at the Refuge Vallot. An hour after leaving the Aiguille a storm broke upon them, they became bewildered, wandered about for several hours, and at last stopped, dug a hole in the snow, and remained in it all night. According to the statement of the guides, Mr.

[1] Jean-Joseph Maquignaz and Antonio Castagneri were the two leading Italian guides. A portrait of Maquignaz is given in my *Guide to Zermatt and the Matterhorn*.

[2] M. Imfeld says *five* workmen went down. See p. 72.

[3] "Enfin, la mort de Jacottet n'a-t-elle pas été causée par la même maladie? C'est mon avis. La diagnose d'autopsie annonçait le commencement d'une inflammation des poumons et celle du cerveau. Je me permets de nier l'inflammation du cerveau pour des causes que je ne peux citer ici. Le cours rapide de l'inflammation pulmonaire ne peut être expliqué que par l'influence du mal de montagne sur l'affaiblissement du cœur et sur l'énergie du système nerveux de ce jeune homme, autrefois si robuste."

Nettleship was in good spirits, assisted in digging the hole, and even sang during the night. They had sufficient food and wine, but no extra clothing.

"The storm continued the whole of the night. On the morning of the 25th it was still snowing hard, and all tracks were obliterated. The guides advised Mr. Nettleship to remain where he was, on the chance of a change of weather, but Mr. Nettleship urged that it was idle to remain there and die like cowards, and that they must make an effort to get away. He therefore started, the guides following him. They proceeded some little distance, when Mr. Nettleship stumbled and became unsteady. The guides offered him wine and brandy, which he refused. He then cried out and fell forward, uttering some words in English, after which he took each guide by the hand, bade them good-bye, closed his eyes and expired.

"The guides remained with him for a short time, and then placing his ice-axe upright in the snow to mark the place where he lay, they left him. After a short time the weather cleared a little, the guides caught sight of the Vallot hut, made for it, and stayed there all the night of Thursday the 25th.

"Friday the 26th was fine, and the guides returned to the Dôme, where the body lay. They then descended to the Grands Mulets, whence Alfred Comte brought the news to Chamonix, Simond remaining at the Grands Mulets."

Twelve men were at once sent off, they recovered the body, and it was interred in the English Churchyard, on the south side of the church. Mr. C. E. Mathews, the writer of the letter in the *Times* from which the above quotation is made, remarked that "it was the extreme of imprudence for the guides to have left the hut on the Aiguille du Goûter in the face of the impending storm, and it was a grave error in judgment that the party, when they encountered the *tourmente* on the Dôme, did not instantly return to the Aiguille before the ascending track had been obliterated." The Society of Guides did not, however, consider that any blame attached to Comte and Simond, and their names were still retained on the Register.

Signor Poggi killed by a falling stone (1893). On August 27, 1893, Signor Poggi was descending the Aiguille Noire de Péteret, with David Proment and one of the Fenoillets of Courmayeur; and, when about two hours down, a stone fell near them and struck some loose stones, which were projected amongst the climbers. Proment was hurt and had his axe broken. Signor Poggi was hit behind the ear and killed on the spot.[1]

Signor Cumani, an artist, attempted to ascend Mont Blanc alone, by way of the Brenva Glacier, in September, 1893. He has not been heard of since! *Alpine Journal*, vol. xvii, p. 43.

Dr. Robert Schnürdreher, of Prague, **Michel Savoie** (guide), and **Laurent Bron** (porter), of Courmayeur, were found close together *in a crevasse*, **in August, 1895,** all dead, but not much mutilated. It appears that they ascended Mont Blanc on August 17, descended the same evening to the Refuge Vallot, and on the next morning returned towards Chamonix. Their absence was not remarked for some days, but when

[1] Many casualties of a more or less serious nature have occurred in the Alps from falling stones; but this is believed to be the first instance of anyone being killed outright, on the spot.

search was made they were speedily discovered, about 80 feet down in a large crevasse, opposite to the Grands Mulets, and a little distance below the ordinary track. Frédéric Payot, who was with the search party, said that, in consequence of the long continuance of fine weather, all the slopes of Mont Blanc were more iced than usual, at the time this accident occurred; and that he thought it was probable they had commenced a glissade, had lost command of their movements, and had simply fallen headlong into the crevasse. The position of the crevasse in which they were found is indicated by an asterisk on the view of Mont Blanc from the Brevent.

Emile Rey, of Courmayeur, **lost his life on the Aiguille du Géant**, whilst descending, on **August 24, 1895.** The following account is based chiefly upon a description furnished to the Syndic of Courmayeur by Mr. Roberts, the only witness of the catastrophe.

Mr. A. C. Roberts, an English climber, engaged Rey for a few days, and on August 23 the two climbed together the lower peak of the Aiguille du Dru, sleeping that evening at the Couvercle. They started next morning at 4.40 and reached the summit of the Aig. du Géant at 2 p.m. Commencing the descent at 3.20 the base of the final peak was reached at 4.5. Shortly after this, the weather looking bad, Rey said that they would move more quickly if unroped. They accordingly coiled up the rope and proceeded on the descent, Rey leading, carrying a light sack and the rope. About 4.30 they reached the top of the rocks which descend to the lower snow-fields. The climbing here is easy, but involves the descent of one or two chimneys, at the top of one of which Mr. Roberts waited whilst Rey went down, face outwards. Close to the foot of this chimney Rey jumped, or dropped, on to a small shelf of wet rock, sloping slightly outwards, and covered with small pebbles. He slipped, and for a short distance slid over snow-covered ice. He tried to dig his axe in, but it slipped from his grasp, and he was precipitated in three bounds on to the snow some 600 feet below and to the N. of the route to the hut. Mr. Roberts could see the body lying motionless on the snow. He attempted to reach it both by the rocks and by the snow which skirts them, but succeeded only in getting within about 200 feet. He shouted repeatedly, but got no answer. Snow fell heavily, and a thick fog made it impossible to persevere in the attempt, so, at 6 p.m., he turned away, and, by aid of map and compass, reached the Col du Géant hut at 7 o'clock. Here he found two Swiss climbers without guides, and shortly afterwards a large party of Dutch gentlemen and ladies arrived from the French side with six guides and porters. Snow fell throughout the night, and all in the hut agreed that nothing could be done before the morning. News of the disaster was carried by the Dutch party to Courmayeur, whence a caravan of guides and porters started at once to recover the body, which they carried to Courmayeur on the following day, August 26.—*Alpine Journal*, vol. xvii, pp. 561-2.

The news of the death of Emile Rey came as a great and painful surprise upon all who knew him. He combined skill, courage, and dexterity. When the most capable guides have been asked in late years who they, amongst themselves, reckoned the best mountaineers of the time, the name of Emile Rey was always included in their selections. One can only conclude that even the best mountaineers are not infallible.

Mr. H. N. Riegel, a young man who was said to have come from Philadelphia, U.S.A., lost his life about the middle of **July 1898**,

while attempting to cross Mont Blanc alone. His body was found on July 18, by some French guides, near the upper part of the Italian Glacier de Miage. In their opinion he had fallen several thousand feet. The *Tribune de Genève* made the following remarks upon this affair. "Et maintenant, que dire de cet accident sinon qu'il ne rentre pas dans les accidents ordinaires de la montagne, et qu'il peut être considéré comme un suicide véritable!"

Mr. F. A. Binns (English) and **Xavier Imseng** (Guide of Saas-Fée) were killed on Sept. 16, 1898, while descending from the **Aig. des Charmoz.** Their bodies were found about 75 feet down in a crevasse, below a snow couloir, upon which one or both had slipped. From the torn condition of their fingers, it was conjectured that they had made desperate attempts to save themselves, too late.

"We regret to learn that on Aug. 25, 1899, the famous climber **Herr L. Purtscheller, of Salzburg, broke his right arm badly in two places,** when descending (with a guide and another traveller) the steep snow-slope below the last rocks and above the bergschrund at the foot of the Aig. du Dru. The guide's axe broke, and he slipped, dragging the two travellers for a distance of about 20 feet into the bergschrund." *Alpine Journal*, vol. xix, p. 590. Herr Purtscheller, it is said, did not recover from this accident. He died six months afterwards at Bern.

Death of Dr. Cauro on the Montagne de la Côte.—On Aug. 28, 1899, Mons. Lespieau and Dr. Cauro (aged 35), with three porters, went to the Montagne de la Côte with the intention of laying telegraphic wires from its summit to the Grands Mulets, over the intervening fissured and riven ice. When upon the upper part of the Montagne and on a bit of nearly level path, they were walking in single file,—the porters first and Dr. Cauro last. Lespieau, turning suddenly round, perceived that his friend was missing; and one of the porters going back immediately caught sight of the Doctor rolling down a water-course only 20 mètres away. "We ran in pursuit," says M. Lespieau. "I estimate that in five minutes we went down the 200 mètres our friend had fallen." He was dead when they reached him. The external injuries were not serious, but his neck was broken. The cause of the fall has not been ascertained.

Killed by lightning on the Aiguille du Géant.—A week after the Aiguille du Géant was climbed by MM. Maischberger, Pfannl, and Zimmer [see p. 154], their feat was repeated by Mons. Emile Fontaine with the guides Joseph Simond and Joseph Ravanel. While descending, a thunderstorm surprised the party; and Simond, who was leading, was killed instantaneously by a flash of lightning, which also severed the rope leading from him to Mons. Fontaine, and caused the corpse of the unfortunate man to fall a great distance on to the glacier below. It is stated that Simond was the only member of the party carrying an ice-axe,—M. Fontaine and Ravanel having left theirs at the foot of the Aiguille, to be picked up when returning.

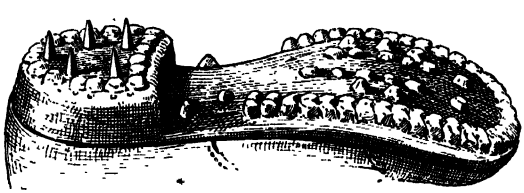
Another death from falling stones.—On Aug. 11, 1901, fourteen excursionists from Geneva started from the Montanvert to ascend the

Pic du Tacul, accompanied by a single guide [Jules Simond]. At about 1 P.M., when descending, a loud noise was heard above, and all of the party except one got under cover. Mons. Porchet, it is said, seemed fascinated, and lingered behind. A large rock struck him on the chest and hurled him down. Notwithstanding the efforts which were made by his friends, he expired on the spot an hour and a half afterwards, from the effects of a fractured skull and the other injuries which he had sustained.

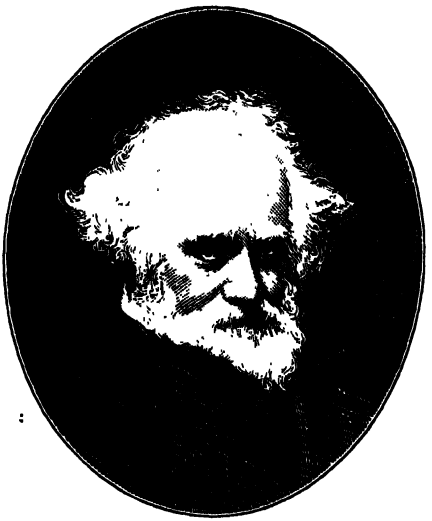
A Mauvais Pas.—On Aug. 4, 1902, a French lady, while crossing the place called the *Mauvais Pas* by the side of the Mer de Glace, met a party coming in the contrary direction. She attempted to pass outside, and falling about a hundred feet, was killed on the spot.

Three out of four killed.—On Aug. 8, 1902, MM. Henry Mauduit (aged 27), and Jean Stæling (20), Members of the French Alpine Club, left Chamonix with a guide named Blanc, of Bonneval-sur-Arc, and a porter named Culet from the same village, intending to pass the night at the Vallot Refuge. A storm broke upon the party about 4 in the afternoon, on the Grand Plateau. Still they continued the ascent. At length the violence of the wind caused them to turn, but after wandering about for some time they lost themselves completely, and passed the night on the snow (so it appeared ultimately) only about 20 min. distance from the Refuge. At daybreak the descent was continued. A few minutes later M. Mauduit fell dying, and shortly afterwards his companion also expired. Blanc and Culet went down by themselves, and the former presently fell into a crevasse to a depth of about 130 feet, though without seriously injuring himself. The porter, however, soon afterwards tumbled head first into another crevasse, and was killed on the spot. The above details are extracted from the *Bulletin du Club Alpin Français*, 1902, where the story is related at considerable length.

In Aug. 1903, **three young men from Geneva** set out to ascend Mont Blanc, but they got no farther than the top of the Aig. du Gouter. Bad weather came on shortly after they arrived there, and they decided to return. In descending, one of them slipped upon snow when about 150 mètres below the *cabane*, and, falling down a gully for about 1000 feet, was killed on the spot.



EMILE REY'S BOOT (1894).



DR. J. JANSSEN.

CHAPTER VII.

THE OBSERVATORIES UPON MONT BLANC.

CAMPING ON THE SUMMIT—UNHAPPY EXPERIENCES OF DR. TYNDALL —A CUP OF TEA PRODUCES A DISASTROUS EFFECT—HARD TERMS IMPOSED ON MONS. VALLOT—ERECTION OF THE VALLOT OBSERVATORY—DR. JANSSEN'S PROJECT—EIFFEL, OF TOWER FAME, CONSULTED—DRIVING A TUNNEL UNDER THE SUMMIT—STRIKE OF THE WORKMEN—DISCOVERY OF A PRUNE-STONE!—'*TOURMENTES*' IMPEDE THE WORK—M. ROTHE AND HIS GUIDE KILLED BY AN AVALANCHE —SUDDEN DEATH OF DR. JACOTTET—NO ROCK IS FOUND, AND DR. JANSSEN DETERMINES TO BUILD ON SNOW—THE '*EDICULE*'—CONSTRUCTION OF THE OBSERVATORY—WINTER TEMPERATURES—THE HEIGHT OF MONT BLANC.

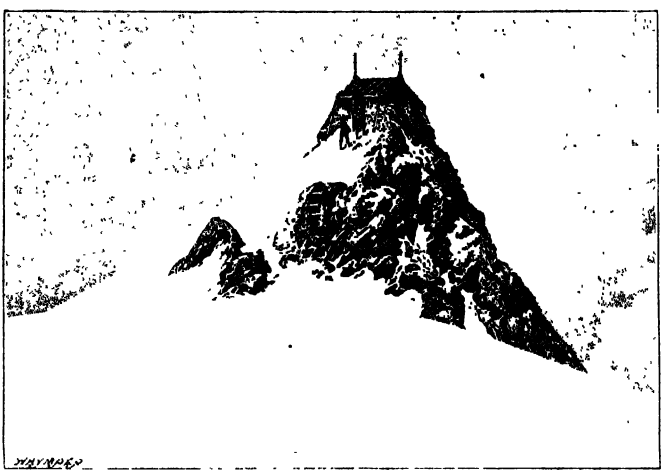
THE establishment of two Observatories on Mont Blanc, one between the Dôme du Goûter and the Bosses du Dromadaire at the height of 14,320 feet, and the other upon the Summit, cannot be overlooked in the history of the mountain. The former of these enterprizes is due to a Parisian, Monsieur J. Vallot, and the latter to Dr. Janssen, Director of the Observatory at Meudon. M. Vallot is a mountain enthusiast, and in 1887 performed the unprecedented feat of camping

under canvas on the summit for three days and nights. Until he did so, only one person had encamped there before, namely Dr. John Tyndall, in 1859; and his experiences were particularly unhappy. Both he and the whole of his guides were incapacitated by mountain-sickness, and they came down the next morning in a forlorn state.[1] This occasion was well remembered at Chamonix, and M. Vallot found difficulty in persuading anyone to go with him. When they at last started he was accompanied by M. Richard and a caravan of guides and porters—in all, nineteen persons. So far as the commencement of the ridge of the Bosses du Dromadaire (that is, to about the height of 14,000 feet) they got along all right; but then M. Richard, who was not accustomed to mountain-walking, began to flounder. A little higher up one of the porters became incapable, and by the time the summit was reached M. Vallot himself was seized with vomiting and was obliged to lie down on the snow, exhausted. The porters, after having deposited their loads on the summit, were sent back to Chamonix, while MM. Vallot and Richard, with two guides, remained on the top during three days occupied in meteorological and other observations. Their experiences, which were detailed at length in the *Annuaire* of the French Alpine Club, were very curious. They found themselves entirely without appetite, and unable to eat. Even a cup of tea "produced a disastrous effect." On the third night, one of the guides went out of the tent for a moment, and returned in a great state of alarm, saying that the air was full of electricity. Vallot went out to see, and says that from the tent, from the erection sheltering the instruments, and from himself, "a harsh rustling proceeded, caused by thousands of sparks. My hairs stood on end, and each individual one seemed to be drawn away from me separately. The sparks were felt all over the body; one couldn't remain outside without suffering; we were literally bathed in electricity."

The foundation of the Vallot Observatory was a result of this journey. At first, M. Vallot thought of having a cavern excavated in some of the highest rocks; but he abandoned this idea, and decided to put up a wooden châlet a little below the lower of the two snowy humps which are called the Bosses du Dromadaire, at the height of 14,320 feet above the sea. Difficulties arose at the outset, for the Commune of Chamonix lays claim to the French side of Mont Blanc, and no buildings can be erected without consent. Permission was ultimately granted on rather harsh conditions. The Chamoniards appre-

[1] "Wishing to commence the observations at daybreak, I had carried a tent to the summit, where I proposed to spend the night. The tent was ten feet in diameter, and into it the whole eleven of us were packed. . . Throughout the night we did not suffer at all from cold, though we had no fire, and the adjacent snow was 15° Cent., or 27° Fahr., below the freezing-point of water. We were all however indisposed. I was indeed very unwell when I quitted Chamouni; . . . my illness was more deep-seated than ordinary, and it augmented during the entire period of the ascent. Towards morning, however, I became stronger, while with some of my companions the reverse was the case. . . About twenty hours were spent upon the top of Mont Blanc on this occasion. Had I been better satisfied with the conduct of the guides, it would have given me pleasure at the time to dwell upon this out-of-the-way episode in mountain life. But a temper, new to me, and which I thought looked very like mutiny, showed itself on the part of some of my men." *Hours of Exercise in the Alps*, by John Tyndall; London, 1871, pp. 54-57.

heuded that M. Vallot might turn his establishment into a sort of *auberge*, which would be detrimental to their interests in the inn on the Grands Mulets, and stipulated that he should erect a 'Refuge' as an adjunct to his observatory, at his own expense. This was to become their property, and they were to have the right of taxing all persons ten francs who stopped there for a night, half of the receipts being destined to pay for the maintenance of the Refuge, and half were to go to their lessee at the Grands Mulets for the injury which it was supposed might be done him. These terms were subsequently modified.[1]

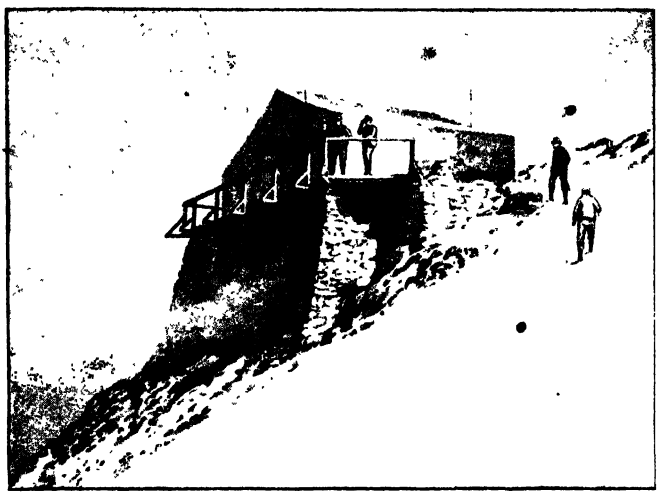


THE REFUGE VALLOT IN 1895.

The materials of the building were ready at Chamonix by the beginning of June, 1890, and then the more serious task had to be undertaken of their transportation to the height of 14,300 feet, for the larger part of the way over snow or ice, on men's backs. One hundred and ten of the guides and porters had agreed to carry a load apiece up to the selected spot; but when all was ready the weather went to the bad, and rendered a start impossible; and when it improved the guides became occupied in conducting tourists. Still, by the end of July, the building was erected on the position which had been chosen for it, on solid rock. At first it was a very small affair, measuring about 16 × 12 feet, and 10 feet high, a portion of which was 'observatory' and the rest 'refuge'; but it grew in

[1] In the first instance, the 'Refuge' was a portion of the observatory buildings. Subsequently, the Refuge was erected that is shewn in the above engraving, at a distance of a few hundred yards from the Observatory. The two establishments then remained distinct for several years; but as snow accumulated round the Observatory to a serious extent, and rendered access to it difficult, M. Vallot had the building taken to pieces and re-erected (in July—Sept. 1898) nearer to the Refuge, and somewhat lower down than it. See Illustration on page 69.

course of time. The transport of the materials and their erection on the spot were far more onerous than the actual construction of the



THE VALLOT OBSERVATORY, IN 1901.

building in the first instance. Chamoniards consider 35 lbs. the maximum load for a man on Mont Blanc, and in all the details attention had to be given to that point. No large timbers or heavy weights could be carried up. During the week which was occupied in the erection everyone had to camp out on snow. Temperature descended to 15° or 16° below freezing-point in the tents, and there were the usual bothers with bad weather and mountain-sickness, which we pass over now, as they will presently recur when speaking about the Janssen Observatory on the summit.

Dr. J. Janssen, the present President of the French Academy of Sciences, and Director of the Observatory at Meudon near Paris, visited the Vallot Observatory a few weeks after it was put up, to carry on spectroscopic observations. He was detained there several days by violent storms, but he ultimately ascended to the summit of Mont Blanc, and got back to Chamonix in safety. The journey occupied him from August 17 to August 23. He was struck with the advantages to science which might be expected from working in a pure atmosphere, and on his return to Paris communicated an account of his journey to the Academy of Sciences, at the meeting on September 22, 1890. He concluded by saying, "I think it will be of the first importance for astronomy, for physics, and for meteorology that an observatory should be erected on the summit, or at least quite close to the summit, of Mont Blanc. I know that objections will be brought forward as to the difficulty of erecting such a building



DR. JANSSEN ASCENDING MONT BLANC.

upon so high a spot, which one can only reach with much trouble, and which is often visited by tempests. These difficulties are real, but they are not insurmountable. I cannot enter deeply into the matter now, and content myself with saying that with the means our engineers can put at our disposal, and with such mountaineers as we possess at Chamonix and in the neighbouring valleys, the problem will be solved whenever we wish." From that time until now Dr. Janssen has been more or less occupied in solving the problem.

In a very short time the necessary funds were subscribed by some of his wealthy and influential friends. Amongst his supporters were Prince Roland Bonaparte, M. Bischoffheim and Baron Adolphe de Rothschild, M. Léon Say and the late President of the Republic. The execution of the project was a work of much greater difficulty. There is no visible rock at the immediate top, and it was proposed to build upon the *snow*. This idea was received with almost universal incredulity. The general opinion was distinctly unfavourable. "The persons," said Dr. Janssen, "who were best acquainted with the glaciers of this great mountain considered that it was quite impossible to establish a building on the summit, such as would serve for observation and residence. They said, and with apparently much force, that the thickness of the snowy crust would prevent foundations being obtained in solid rock, and they would not admit the possibility of establishing the building on snow." Mons. Eiffel, of Tower fame, was taken into consultation, and declared himself ready to construct an observatory on the very top of Mont Blanc, if a rock foundation could be found not more than fifty feet below the surface of the snow, and expressed his willingness to bear the cost of the preliminary operations. It so happens that rocks peep through the snow on three different sides of the summit, no great distance below it--small patches, scarcely visible from below. One, called la Tournette, is about one inch and a half to the *right* of the summit in the folding engraving of Mont Blanc from the Brévent. Another, named les Petits Mulets, is about half an inch *below* the summit in the same illustration. The third, called la Tourette, is on the opposite side of the mountain, and cannot be seen. These rocks which peep through the snow are either summits of Aiguilles, or points on ridges of Aiguilles. But it is exceedingly unlikely that the *highest* points of the Aiguilles are exposed. They are, in all probability, somewhere underneath the summit-ridge, which appears to be placed at the junction of three or more rocky ridges; and as the little patches of rock which do appear on the three sides are only 456 feet (la Tournette), 394 feet (Petits Mulets), and 171 feet (la Tourette) below the extreme top of Mont Blanc, there was at least a possibility that rock might be struck.

M. Eiffel committed the direction of this affair on the spot to M. X. Imfeld, a Swiss, who is well known as a surveyor. A more competent man for the purpose could scarcely have been found. Imfeld had a horizontal gallery driven into the snow, forty-nine feet below the summit, on the French side (the side represented in the engraving of Mont Blanc from the Brévent), and employed as director of the

workmen Frédéric Payot, who is one of the most able and experienced of the Chamonix guides, and has ascended the mountain more than a hundred times. The report rendered by Imfeld to M. Eiffel gives a lively idea of the difficulties of the undertaking. "A wooden hut," he says, "which could be taken to pieces, and transported easily, was made at Chamonix, to form the entrance to the tunnel, and was intended to serve as protection to the workmen. It was divided up into loads, numbered and weighed. From the 10th to the 15th of August was occupied in arranging its transport up to the Vallot Observatory," which place was made the base of operations.

August 13, 1891.—A first *caravane* started with part of the hut and provisions for the Rochers des Bosses.

August 14.—I went with Fréd. Payot and the rest of the porters as far as the Grands Mulets.

August 15.—We reached the Vallot Observatory at 9 a.m., and the summit at mid-day. I settled the position for the mouth of the tunnel, the direction of its axis; and with six workmen arranged the clearing away of the snow, to place the hut.

August 16.—On account of a '*tourmente*' of snow, no one could leave the Observatory.

August 17.—The work done on the 15th of August was partly buried under the snow. It was restored by six workmen, and the tunnel was commenced. Advanced 5 mètres. In the evening, one of the workmen (Jos. Simond) came back ill from the summit. He had a frost-bitten foot, and several toes were without sensibility when pricked with needles. Our doctor, Dr. Egli, of Zurich, gave him the necessary care. Fearing consequences, he wouldn't entertain my suggestion that the man should be sent down to Chamonix.

August 18.—The workmen, discouraged by the illness of their comrade, and by want of space and coverings in the Vallot cabane, and bored by numerous visits of tourists, demanded a rise in their daily wages from 16 to 30 francs. After a long discussion, I offered 20 francs, conditionally on confirmation. One man stuck to his demand and was dismissed. The others remained and continued work in the tunnel. Advanced 5 mètres. At the distance of 16 mètres from the stake (at the mouth), a prune-stone was found.

August 19.—Very high wind. All the workmen went down to the Grands Mulets, to fetch portions of the hut which had been left behind by the contractors, and for wood to burn, and provisions.

August 20.—The workmen were driven back on the Grande Bosse by a very strong north wind, and could not reach the tunnel.

August 21.—Very great '*tourmente*' of snow. Impossible to get to the summit. The porters don't come up. Five workmen decide to go down to the Grands Mulets, to get food. Along with them went a tourist (M. Rothe) with his guide, and tie on to the rope of the workmen. Upon the Petit Plateau, an ice-avalanche fell from the top of the Dôme du Goûter on to the party, and killed the tourist and his guide. My workmen escaped with slight bruises, and went on the same evening to Chamonix. [See p. 61.]

August 22.—Violent storm. Could not leave the Observatory. The porters don't come up.

August 23.—Snow falling. At 2 p.m. arrival of Fréd. Payot and five porters, laden with food and wood. They bring the first news about the accident on the 21st, and the information that the workmen are discontented, and have gone down to Chamonix, and won't come up again. As the porters who had arrived were not engaged as workmen, I directed Fréd. Payot to go down to Chamonix to procure fresh workmen. He left the observatory, accompanied by Dr. Egli and a porter, but they came back in half an hour on account of the violence of the '*tourmente*.'

August 24.—Much new snow. Wind cold. In the afternoon I decided to

try to get to Chamonix, along with Dr. Egli, Payot, and a porter. Got the same evening to the Grands Mulets.

August 25.—Arrived at Chamonix at 10 a.m. In the course of the day engaged six workmen.

August 26.—The workmen went up with Fréd. Payot to the Grands Mulets.

August 27.—Fréd. Payot and the workmen, carrying provisions, went from the Grands Mulets to the Rocher des Bosses.

August 28.—Bad weather. The workmen couldn't get to the summit. I start in the afternoon with Dr. Jacottet, of Chamonix, who wished to make an ascent of Mont Blanc, on which he had failed twice, and he offered to give his services gratuitously, in case of need, during the time he remained at the Vallot cabane.

August 29.—The workmen reached the summit. Advanced 5·3 mètres. One man was sent down to Chamonix ill from mountain-sickness, and another came back with a slightly frost-bitten foot.

August 30.—Fréd. Payot and four workmen continue the tunnel. Advance 5·4 mètres.

August 31.—Snow-storm. The summit is impracticable.

September 1.—Fine weather. Along with Dr. Jacottet, at 9 a.m. we were on the summit. Photographed the panorama. Probed the rock of la Tourette, and also the Petits Mulets, and Rochers Rouges. Advance 1·8 mètres. One workman (Jules Simond) had his fingers frost-bitten.

September 2.—Early in day it was found that Jos. Simond, Jules Simond, and Jos. Charlet were unable to work (from frost-bitten fingers and feet, and mountain-sickness). They were sent down to Chamonix.

Dr. Jacottet unwell (inflammation of the lungs and brain), and I remained at the Observatory to look after him, while Fréd. Payot and all the rest went to the summit, to fix up the hut at the entrance to the tunnel. About 4 p.m. the condition of Dr. Jacottet got worse (delirium). At 5.30 p.m. he lost consciousness, and he died in the course of the night, at 2.30 a.m.

September 3. Conveyal of the corpse of Dr. Jacottet to Chamonix. Consultation with M. Janssen upon the information obtained by probing (sounding), and continuation of the same.

September 4.—By telegram to-day, you announce your intention of suspending the work.

September 4-8.—Examination of accounts, paying off guides, porters, workmen, etc.

The net result was that a gallery 96 feet long was driven, and in the whole course nothing more rocky was found than a prune-stone! M. Eiffel retired from the undertaking, but Dr. Janssen had the gallery carried on by Payot 75 feet farther, at an angle of forty-five degrees to its former course, still without finding rock, and he then decided to erect his observatory on *snow*, and on the highest point of the summit-ridge.

Two important questions, he admitted, required first of all to be elucidated. One was, Will the observatory, if placed on the summit snow, sink or swim? The other was, What movements are there to dread in this snowy cap? To obtain an answer to the first question an experiment was carried out at Meudon. A column of lead weighing 792 lbs., but only one foot in diameter, was placed on piled-up snow, brought to the density of that at the summit. The lead is said to have sunk in less than an inch, and Dr. Janssen considered this result encouraging. "As to the question of the movements," he said, "it was studied and determined by the installation in 1891 of a wooden edifice, which has now been two years on the spot." This

edifice, which they term "the *edicule*,' has now been in position since 1891, but I do not feel that it has yet settled the 'question.' The little building is about six feet high from floor to roof, and a post at each corner is carried down six feet more. To install it, in 1891, a hole was dug; the level of the floor was made to coincide with the level of the summit, and the snow was then filled in again. Its appearance then was that of FIG. 1 in the annexed diagram. In

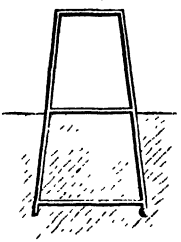


FIG. 1 (1891).

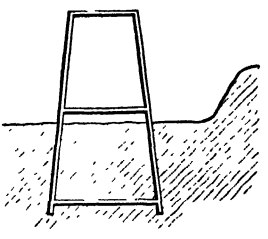


FIG. 2 (1892).

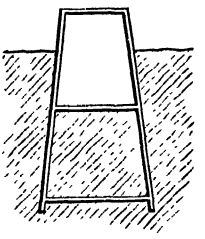


FIG. 3 (1893).

1892 it was noticed that the floor was beneath the general level of the summit, and that on one side the snow rose in a sort of bank to nearly half the height of the hut (see FIG. 2). On August 8, 1893, I visited it, and found that only 2 ft. 3 in. rose above the summit of Mont Blanc (see FIG. 3). In July, 1894, I visited it again, and found it in much the same condition; but the snow had been recently trampled down, and, I imagine, a good deal had been cleared away. The level of the gallery is already more than 49 feet below the summit, and this is a significant fact, affording a practical demonstration that the snows at the top of Mont Blanc are constantly descending to feed and maintain the glaciers below. The summit in 1891 was not the summit in 1892, nor will that of any succeeding year be the summit at a later date. The height of the mountain, nevertheless, remains nearly constant by the accession of fresh snow. It is not the liability of sinking *into* the snow, but the strong probability that any building erected on the top will sink *with* the snow, which gives rise to apprehension about the stability and maintenance of Dr. Janssen's Observatory. At the close of 1897, I was told that it shewed marked signs of subsidence.

He was not, however, dismayed by this prospect, and constantly pressed forward the building to completion. In the winter of 1891-92 the Observatory (partly of iron and partly of wood) was constructed at Meudon, was taken to pieces and forwarded to Chamonix, and in the course of the latter year was transported up the mountain, under the management of Frédéric Payot. By the end of the season about one quarter of the materials had been advanced to a little patch of rocks (the Petits Rochers Rouges) 750 feet below the summit, and the rest so far as the Grands Mulets. There they remained for the winter. The early part of 1893 was occupied in recovering the depôt at the Petits Rochers Rouges, which was buried under 25 feet of snow,

and in bringing up the remainder of the materials. By the end of 1893, the building was erected on the summit, its heavier portions having been hauled up the terminal slope of snow, called the Calotte, by means of little windlasses, such as Payot is holding in the accompanying engraving. The building, however, was not completed until



FRÉDÉRIC PAYOT AT THE ROCHERS ROUGES.

the end of 1894. When I visited it in July of that year it was more than half filled with snow, and two days of hard work were employed before it became tenantable. See Illustration upon page 76. At that time no instruments had been sent up.

Dr. Janssen has shown an energy, courage, and tenacity in the prosecution of his undertaking which would be remarkable in anyone, and are doubly so in a man of threescore and ten, who is unable to climb a yard, and who is so badly lame as to walk with difficulty even on level ground. He has had himself dragged three times to the summit in sledge. On the second occasion the strength of his men was economised on steep places by using the windlasses which had already been employed to haul the materials.



INTERIOR OF DR. JANSSEN'S OBSERVATORY ON THE SUMMIT OF MONT BLANC. JULY 26, 1894.

The principal instrument for the Observatory is termed a *Météorographe*, and has been constructed by Richard of Paris, at a cost of £750. It registers barometric pressure, maximum and minimum temperatures, the direction and force of the wind, etc., etc. It is put in movement by a weight of 200 lbs., which descends about 20 feet and is calculated to keep everything going for eight months—the



DR. JANSSEN'S OBSERVATORY, AND THE 'EDICULE,' IN 1894.

length of time during which it is contemplated it may sometimes be left to itself. In introducing his huge instrument to the Academy of Sciences on August 13, 1894, Dr. Janssen said, "I do not conceal from myself that, notwithstanding the minute precautions which have been taken, there must be some degree of uncertainty about the result." One possibility need only be mentioned. The barometer that will be employed will be a mercurial one of the Gay-Lussac pattern. Until now, the minimum temperature that occurs on the summit of Mont Blanc during winter has been unknown. In the winter of 1894-5, however, thermometers were placed in the interior and on the exterior of the Observatory, and it was found that the former registered −35°·2 Centigrade and the latter −43° C., as the greatest degrees of cold.

These temperatures are respectively equal to −31°·36 and −45°·4 Faht. The former (the inside temperature) is dangerously near to the freezing-point of mercury (−40° F.), and if temperature in the interior of the Observatory should on some future occasion fall a little lower the barometer will cease to act just at a time when it would be particularly interesting to have it in operation.[1] The installation of this instrument was amongst the most important pieces of work which were undertaken at the Mont Blanc Observatory in 1895. A large telescope was sent up in 1896.

Amongst the many things which one may expect to see accomplished, sooner or later, by means of Dr. Janssen's Observatory, will be the more accurate determination of the height of Mont Blanc; though, from the close accordance between the most authoritative of recent determinations,[2] it does not seem likely that a fresh one will necessitate any material alteration in the accepted altitude.

The first careful measurement[3] of Mont Blanc was made by Sir George Shuckburgh, Bart., in 1775.[4] From eighteen observations of mercurial barometer he found that the level of the Lake of Geneva was 1228 feet above the sea; and, by triangulation, that the *apparent*[5] summit of Mont Blanc was 14,432 feet above the Lake of Geneva, or 15,660 feet above the sea. The next measurement was made by De Saussure, in 1787, by means of the mercurial barometer, which he observed during his four and a half hours' stay on the summit. He calculated his observations in several different ways, and his ultimate determination from the mean of his means was that the summit of Mont Blanc was elevated 15,667 feet (2450 toises) above the level of the sea. These two determinations closely approximate to the elevation which is adopted for Mont Blanc upon the current Official Maps of France, Switzerland, and Italy. See Appendix D.

[1] The lowest temperature hitherto recorded *outside* the Observatory is −48° C. (or −54° 4 F.).

[2] See the Table of Heights in the Appendix.

[3] Earlier measurements were very wide of the truth. Peter Martel thought he measured the height of Mont Blanc. He says (at p. 28), "we found . . . the height of the highest mountain" was 2076 toises above the Lake of Geneva. This would make the height of 'the highest mountain' 14,503 English feet above *the sea*. From a mistake in his identification of Mont Blanc in Plate 3 at the end of his pamphlet, I think it likely that Martel was deceived in supposing that he measured Mont Blanc.

[4] See the *Philosophical Transactions of the Royal Society of London*, vol. lxvii, part ii, pp. 513-597.

[5] I say 'apparent summit' for this reason. The ridge at the summit of Mont Blanc, though nearly level, is slightly higher at its eastern than at its western end; and it is possible that Sir George Shuckburgh did not see (or did not identify) the very highest point from the Salève and the Môle, his places of observation. This may partly account for his determination being slightly beneath the reality. Further, it is possible that the elevation of Mont Blanc may have slightly increased since his time, though it does not appear to have changed sensibly in the course of the last half-century.

Some of Sir George Shuckburgh's other determinations come very close to the heights now accepted.

	Sir G. Shuckburgh.	Etat Major Français.
Bonneville . .	1475 feet	1476 feet
Chamonix . .	3365 ,,	3445 ,,
The Montanvert .	6231 ,,	6303 ,,
Summit of the Môle	6113 ,,	6132 ,,
do. Buet .	10,124 ,,	10,200 ,,

CHAPTER VIII.

HOW TO GET TO CHAMONIX.

ROUTE TO TAKE—HOW TO PRONOUNCE CHAMONIX—TIMES, DISTANCES, AND FARES—PARIS TO LE FAYET—GENEVA AND ITS ATTRACTIONS—ROAD FROM GENEVA TO CHAMONIX—ANNEMASSE—BONNEVILLE—THE MÔLE—CLUSES—SALLANCHES—FINE VIEW OF MONT BLANC—LE FAYET—CHÂTELARD—A ROMAN GALLERY—LES MONTÉES—THE VALLEY OF CHAMONIX.

It may be taken for granted that everyone who wishes to get to Chamonix will want to go by the most direct way, and as quickly as possible. The most direct and the quickest way is through Paris, and by the Paris, Lyons and Mediterranean Railway, *viâ* Macon, Culoz, Bellegarde, Annemasse, and la Roche to le Fayet (for St. Gervais). But, before starting for the place, a word ought to be said about the spelling and pronunciation of its name.

In the course of reading I have found the following ways of spelling the name:—

CHAMOUNIX.	CHAMMONIS.	CHAMOUGNY.	CHAMOUNIS.
CHAMOUNY.	CHAMUNIX.	CHAMOIGNY.	CHAMMUNY.
CHAMOUNI.	CHAMONY.	CHAMONIS.	CHAMUNIS.

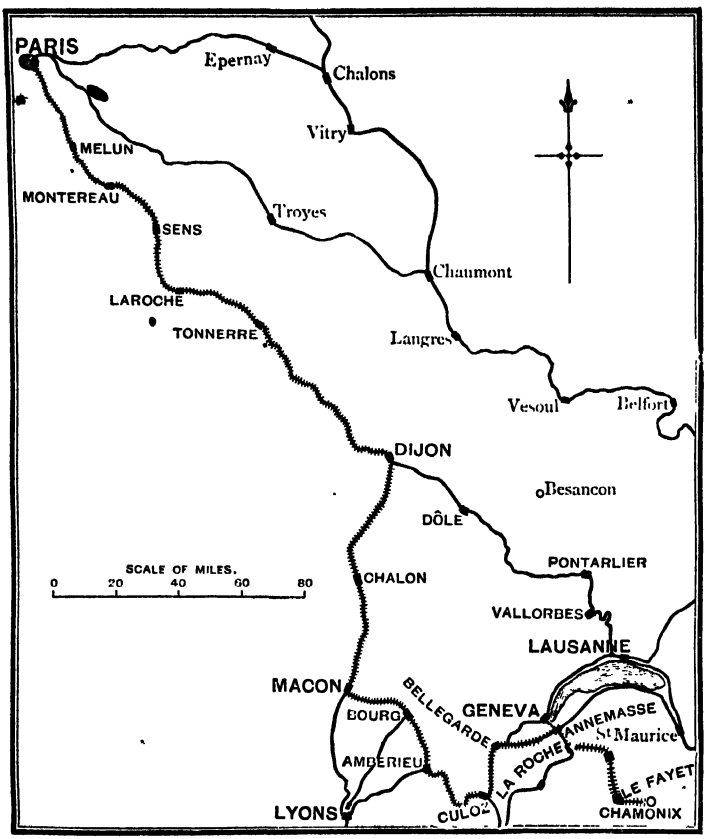
I reject the whole of them and adopt Chamonix, because this appears to be the correct form. It is almost the only form I have found, when searching the Archives, in documents dating back for several centuries.[1] I am told by M. le Maire that it is the only form he can recognize; and it is employed upon the Official Maps of France, Switzerland and Italy. In regard to pronunciation I am less clear. The second syllable is neither *moon* nor *moan*, but something between the two; and, after having made many Chamoniards pronounce the name hundreds of times, it appears to me that *Sham-moon-nee* is about the closest one can get to it, in phonetic English. Upon no account pronounce the x.

Leaving London[2] by one of the morning expresses which arrive at

[1] A large proportion of the names of villages, mountains, etc., in the Mont Blanc district are spelt in two or more ways; and, besides difficulties which may be experienced on this account, the tourist will perhaps feel others arising from the duplication of names, or from closely similar names. There are, for example, two Têtes Noire,—one is a carriage-road leading from Chamonix to Trient, and the other is a mountain between Servoz and St. Gervais. A portion of the road from Chamonix to Sallanches is called les Montées, and a little above the village of Argentière there is a Col des Montets. There are two places, each only a few miles from Chamonix, called Châtelard; two Cols called Col de la Forclaz; and two eminences called l'Aiguillette. In the basin of the Mer de Glace there are two pinnacles called le Capucin. There is an Italian and a Swiss Val Ferret, and an Italian and a French Glacier de Miage. There are mountains called the Darrei and the Darrey, the Chatelet and the Châtelet. The valley of Chamonix has its Aiguilles Rouges, and the Italian Val Ferret, and the Val Véni have a Mont Rouge apiece.

[2] The Fares from London to Chamonix are: (a) *viâ* Newhaven and Dieppe, £5:0:7

Paris in the afternoon,* there is sufficient time to dine comfortably before leaving by the Evening Express for Chamonix, which is the best train to take, during the season. This train is in the Gare de Lyon



PARIS TO CHAMONIX.

well before the hour for starting, and places can be secured. The correct course is to select and secure a place *in good time*, and then to dine leisurely at the superb Buffet, which was opened in Dec. 1901.

The Evening Express is 1st and 2nd class as far as Bellegarde, and only stops at Laroche, Dijon, Macon, Bourg, Amberieu, and Culoz. After Bellegarde it takes 3rd class, and stops at all stations.

1st cl., £3:9:6 2nd cl.; and return tickets £7:17:0 and £5:12:4. (b) *viâ* Boulogne, £5:16:10 and £4:1:0; return tickets £9:15:4 and £7:2:11. (c) *viâ* Calais, £6:2:10 and £4:5:5; return tickets £9:15:4 and £7:2:11.

The P.L.M. Day Express from Paris to Geneva has a Wagon-Restaurant attached; and so also has the Day Express from Geneva to Paris.

Distance in kilomètres.					Fares from Paris. 1st Cl. frs. c.	2nd Cl. frs. c.	3rd Cl. frs. c.
	Paris . .	(B).	dep.	8.50 p.m.			
155	Laroche . .	(B).	arr.	11.14 ,,	17 35	11 60	7 65
			dep.	11.19 ,,			
315	Dijon . .	(B).	arr.	1.33 a.m.	35 30	23 80	15 50
			dep.	1.38 ,,			
410	Macon . .	(B).	arr.	3.17 ,,	49 30	33 25	21 70
			dep.	3.27 ,,			
478	Bourg . .	(B).	arr.	3.59 ,,	53 55	36 10	23 55
			dep.	4. 1 ,,			
509	Amberieu . .	(B).	arr.	4.32 ,,	57 05	38 45	25 10
			dep.	4.37 ,,			
559	Culoz. . .	(B).	arr.	5.26 ,,	62 65	42 25	27 55
			dep.	5.38 ,,			
592	**Bellegarde** .	(B).	arr.	6.10 ,,	66 30	44 75	29 20
			dep.	6.36 ,,			
605	Valleiry . . .		...	7. 2 ,,			
611	Viry . . .		..	7.11 ,,			
616	St. Julien . .		...	7.21 ,,			
619	Archamps . .		...	7.28 ,,			
624	Bossey-Veyrier .		...	7.37 ,,			
631	**Annemasse** .	(B).	arr.	7.52 ,,	70 65	47 70	31 10
			dep.	8.53 ,,			
	Etrembières-Salève .			9. 2 ,,			
634	Monnetier . .		...	9. 7 ,,			
640	Regnier . .		...	9.17 ,,			
643	Pers-Jussy . .		..	9.24 ,,			
647	**La Roche** . .		...	arr. 9.31 ,,	72 55	49 00	31 95
				dep. 9.43 ,,			
654	St. Pierre . .		..	9.56 ,,			
658	Bonneville . .		...	10. 6 ,,			
665	Marignier . .		..	10.18 ,,			
669	Le Nanty . .		.	10.25 ,,			
672	Cluses . .		arr.	10.31 ,,	75 35	50 90	33 15
676	Balme-Arâches .		...	10.11 ,,			
679	Magland . .		.	10.18 ,,			
683	Oex . . .		..	10.56 ,,			
688	Sallanches . .		...	11. 6 ,,			
691	Passy-Domancy .		...	11.14 ,,			
694	Le Fayet—St. Gervais	(B).		11.20 ,,			
			dep.	11.30 ,,			
714	**Chamonix** .		..	arr. 12.40 p.m.	82 80	57 55	39 25

(B) signifies Buffet.

N.B.—The times may be altered. Make enquiry.

A good dinner before starting ought to enable one to sleep through the night. Awake at **Amberieu** to admire the rising sun and to look at the scenery. Take coffee at **Bellegarde.** Shortly after leaving that place the railway crosses the R. Rhone, and, rising to a considerable height, gives many views over very picturesque country. At **St. Julien** (15 miles from Bellegarde), the line approaches Mont

Salève, and for the next 5 or 6 miles skirts the western base of that mountain. Just before arriving at Annemasse, the Arve (coming from Chamonix) is crossed at the Pont d'Etrembières.

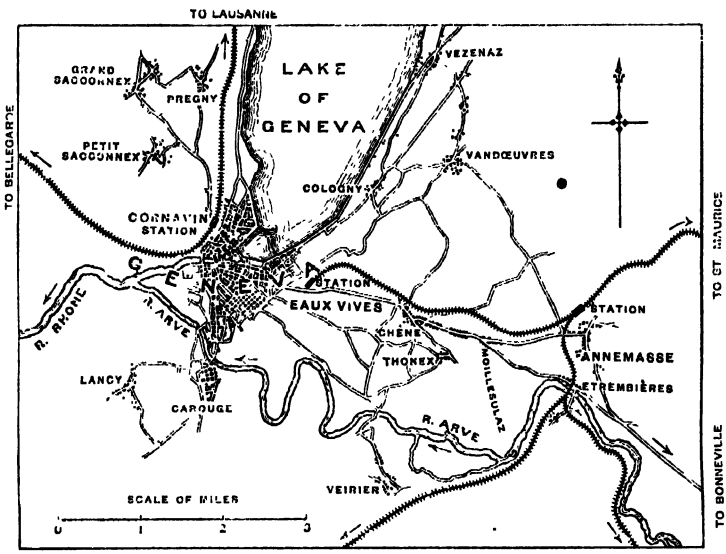
Annemasse (436 mètres), 39 kilomètres from Bellegarde, is a busy junction, with lines radiating to Geneva (Eaux-Vives Stn.), Bouveret and La Roche. **Buffet good,** prices fair. The opportunity to breakfast here will not be overlooked by persons of discretion. HOTEL DE L'EUROPE, just outside the Station. Upon leaving Annemasse, the train recrosses the Bridge of Etrembières, and for a few miles the line winds round the *eastern* base of Mont Salève. A succession of charming prospects delight the eye on every hand. At **La Roche** (an unspoiled French village rarely visited by tourists) *take care that you are right for le Fayet,* and are not taken to Annecy and Aix-les-Bains. The line divides here. The le Fayet branch goes away to the left, and sweeps round to cross the Arve. The Annecy line turns to the right, and makes a great bend to climb the hills. In approaching **Bonneville** the conical mountain called the Môle is seen right in front. The line now crosses to the right bank, and keeps on that side, near the Arve, until beyond Cluses. From the next station (**Marignier,** HOTEL DE LA GARE, small, close to the Station) a tramway leads to St. Jéoire, and runs in correspondence with the railway. Cluses is 7 kils. farther on, and the remaining stations are at Balme-Arâches, Magland, Oex, Sallanches, Passy-Domancy, and le Fayet. Passengers change carriages at le Fayet into those of the **Electric line** to Chamonix, and the halt which is made is generally long enough to take refreshment at the **Buffet,** where a *Repas à prix fixe* (3 frs., Wine or Beer included) is supplied from 9.45 a.m. to 3 p.m., and from 6.30 to 7.30 p.m. For Hotels at le Fayet, and for the continuation of the Route to Chamonix, see p. 88. For Plan of le Fayet see p. 142.

Geneva.—(374 mètres, 1227 feet). Pop. including the Suburbs was said to be 98,248 in July, 1899. In consequence of the transference of traffic through Geneva to the line Bellegarde—Annemasse—le Fayet, the *road* from Geneva to le Fayet through Bonneville, which used to be a busy one, is now almost deserted. Instead of seeing clouds of dust raised as *milords* rolled past in their chariots, and by the diligences conveying Tom, Dick and Harry, Jules and Jean, one can now look along vistas of a mile or more without perceiving a single individual. Geneva should be visited, either going or returning. The express that left us at Bellegarde went on to Geneva **(Cornavin Station).** Cornavin is *the* Station, the most important one,[1] at Geneva, and formerly was the *only* one. Now, there is another at **Eaux-Vives,** the Terminus of a short line which runs to Annemasse. See the annexed Plan. From Cornavin Station one can walk to Eaux-Vives Station (or take a tram which runs from one to the other) then take train to Annemasse, and there pass over

[1] The [Jura-Simplon] line which runs round the northern side of the Lake of Geneva (or right bank as it is termed) has its Terminus at Cornavin. From this Station one can go to any part of Switzerland. Trains for *France* leave Cornavin at *French* time, and for *Switzerland* at *Swiss* time. See Introduction, page vi.

to the train coming from Bellegarde. But as this involves changing carriages at Geneva, and again at Annemasse, it is a more troublesome route than the other, especially for people with baggage.

There are many inducements to visit the old City of Geneva. The superb views of Mont Blanc which may be had from the shores of the Lake, and even in the streets, the beauty of the Lake itself, the admirable quays and pretty gardens, the monuments and public buildings, antiquities and museums, all combine to make it attractive.[1] It is well provided with Hotels. From the Table given on page 84, which



PLAN OF GENEVA, SHEWING THE POSITION OF THE RAILWAY STATIONS.

includes the principal ones, it will be seen that there are hotels to suit all pockets. The largest and finest, the NATIONAL, though beautifully situated, is a considerable distance from both railway stations. Amongst the better and *most central* ones may be mentioned the HOTEL DE LA POSTE (in the middle of the City), the HOTEL SUISSE and HOTEL TERMINUS AND BAUR (both close to Cornavin).

The road from Geneva to Chamonix passes through Chêne, Annemasse, Bonneville, Cluses, Sallanches, and the distances are—

Geneva to Annemasse	8	kilomètres
Annemasse to Bonneville	20	,,
Bonneville to Cluses	14	,,
Cluses to Sallanches	16·7	,,
Sallanches to Chamonix	26	,,
Total	84·7	kilometres

or about 53 English Miles.

[1] See *Genève et ses Environs*, Plan dressé par Charles Bobillier, Geneva, 1899. H. Kündig.

HOTELS AT GENEVA

Name of Hotel.	Address.	Proprietor.	No. of Beds.	Chambre, 1 Bed.	Chambre, 2 Beds.	Déjeuner complet.	1st Table d'hôte.	2nd Table d'hôte.	Pension.
				frs.	frs.	frs.	frs.	frs.	frs.
Grand Hotel National (r) .	Quai du Leman . .		260	5—10	9—20	1.50	3.50	5	from 12
Hotel des Bergues (r) . .	Quai des Bergues .		180	4—9	7—20	1.50	3.50	5	,, 10
Hotel de la Poste (l) . .	Place de Hollande .	C. Sailer, prop. . .	140	2.50—4	5—8	1.50	3.50 *v*	3 *v*	7—10
Hotel de l'Ecu (l) . . .	Place du Rhône . .	Haake Bros., props. .	120	from 3.50	from 7	1.50	3.50	4.50	from 9
Grand Hotel Beau Rivage (r)	Quai des Pâquis . .	Mayer & Kunz, props. .	150	,, 1.50	,, 9	1.50	...	...	...
Hotel du Lac (l) . . .	Place du Port . .		122	,, 3.50	,, 7	1.50	3.50 *v*	4.50 *v*	...
Hotel de Russie (r) . .	Quai du Mont Blanc .	Vve. A. Rathgeb, prop.	100	,, 4	,, 8	1.50	3	5	...
Hotel de Paris (l) . . .	Grand Quai . .		50	...	...	...	...	...	...
Hotel de la Paix (r) . .	Quai du Mont Blanc .	F. Weber, prop. . .	180	,, 4	,, 8	1.50	3.50	5	from 10
Hotel Suisse (r) . . .	Rue du Mont Blanc .	Panzera & Co., props. .	130	4—5	8—10	1.50	...	...	10—12
Grand Hotel Metropole (l) .	Grand Quai . .	D. Burkard, dir. . .	180	4—7	8—14	1.50	4	5	9—15
Hotel Terminus and Baur (r)	Rue des Alpes . .	F. Baur, prop. . .	110	2—4	4—8	1.25	3	3.50	8—12
Hotel d'Angleterre (r) .	Quai des Pâquis . .	M. Reichert, prop. .	90	3.50—6	7—12	1.50	...	4	8—12
Hotel Victoria (l) . . .	Rue Pierre Fatio .	W. Niess, prop. . .	80	3.50—4.50	7—9	1.50	3	3.50	8—10
Hotel Richemond (r) . .	Place des Alpes . .	A. Armleder, prop. .	75	from 3	from 6	1.50	3	3.50	from 7
Hotel de Geneve (r) . .	Rue du Mont Blanc, 13	J. Zinner, prop. . .	70	2—3	4—6	1.25	3.50 *v*	3 *v*	7—8
Hotel de la Monnaie (r) .	Rue de Lausanne .	A. Vernet-Schmid, prop.	40	1.50—3	3—5	1.00	2.50 *v*	2.50 *v*	6.50—10
Hotel de la Balance (l) .	Rue du Rhône, 2 .	Thiévent, prop. . .	90	...	...	...	...	...	...
Hotel du Mont Blanc (l) .	Rue du Rhône, 64 .	Vve. Gras-Moynat, prop.	35	...	...	...	...	...	...
Hotel Bristol (r) . . .	Rue du Mont Blanc, 10	J. Curtet, prop. . .	60	2.50—5	4—10	1.25	3	4	6—9
Hotel du Grand Aigle (l) .	Rue du Rhône, 48 .	Schweger, prop. . .	45	...	...	...	...	...	...
Hotel Pension Bellevue (r) .	Rue de Lyon, 29, 31. 33	Jean Sutterlin, prop. .	80	2.50	5	1.25	2	2.50	5—7

Note—In most instances the Pension price is for at least one week. Firing is extra in all cases.

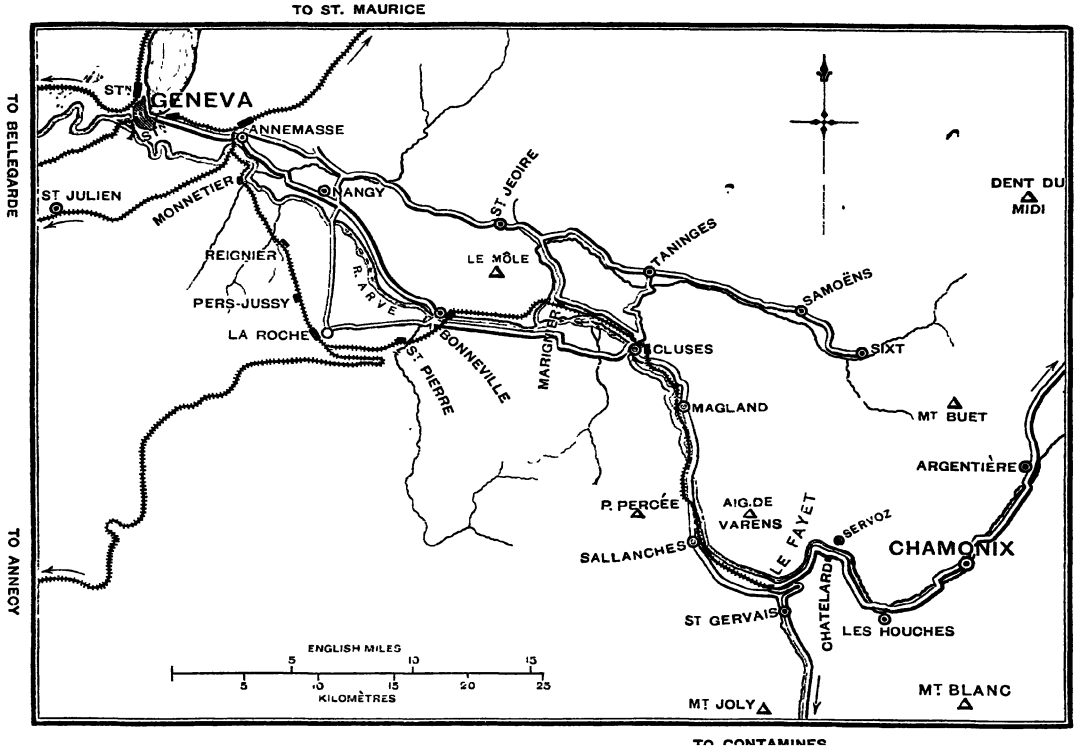
Annemasse (436 mètres) is a large village, on flat ground, a little above the Arve. Soon after passing it, there are admirable views of Mont Blanc on the road, which is well kept up, and a good road for pedestrians as well as an excellent one for cyclists.[1] The entire rise from Geneva to Chamonix is only 2217 feet (distributed over 53 miles), a great part of which occurs between le Fayet and les Houches. Four kils. from Annemasse the road crosses the Menoge Torrent by a fine stone bridge of 3 arches, and then turns sharply to the right (south). A pedestrian can save time here by taking an old road which leads away on the left and cuts the curve made by the present route. Three kils. from the bridge one comes to the village of **Nangy** (478 mètres), HOTEL DE L'ECU DE GENÈVE; and in 4½ kils. more passes through **Contamine sur Arve** (458 mètres), where there is a small inn. The road continues close to the Arve all the way to Bonneville, which is 8 kils. farther on.

Bonneville (450 mètres), on the right bank of the Arve, which just below the town is joined by the Borne Torrent (both streams embanked), has 2271 inhabitants, wide streets, and a large *Place*, planted with trees. HOTEL DE LA BALANCE (on the *Place*), HOTEL DU SOLEIL. Numerous good shops. There is a steam tramway from Bonneville to Annemasse, with trains running three times a day each way, corresponding with others at Annemasse for Eaux-Vives. Fare 1 fr. 10 cents. The road to Chamonix crosses the Arve by a stone bridge of 4 arches at the S. end of the town. On the near side of the bridge there is an Obelisk erected in memory of the soldiers of Haute Savoie who fell in the war of 1870-71; and on the opposite side of the bridge there is a lofty stone column in honour of King Charles Felix. Post and telegraph office is against the bridge, and in the same building is the seat of the French Alpine Club, section du Mont Blanc, founded May, 1877.

The summit of **the Môle** (1869 mètres, 6132 feet), to the N.E. of Bonneville, is a renowned *pointe de vue*, which is often ascended to see the Range of Mont Blanc.[2] Being quite isolated, it has an uninterrupted panoramic view all around. It should be noted, however, that the summit of Mont Blanc itself bears S.E. of the Môle, and the sun is too much in front of the spectator *in the morning* to let the mountain be seen to advantage. The afternoon and evening light are far better for it, though the morning is the best time for viewing the rest of the panorama. From Bonneville to the top of the Môle occupies 3 h. 40 min. to 4 hours; the descent can be made in 1 h. 45 min. or less. Guide 10 francs. The path commences at Bonne-

[1] In the little pamphlet entitled *Itinéraires de Courses pour Cyclistes dans les Environs de Genève*, par Ch. Bastard, Genève, 1900, from Geneva to Chamonix and back is included amongst the excursions for one day and a half,—seven and a half hours going, and five hours returning.

[2] The Môle was ascended by W. Windham (1741) and by Peter Martel (1742). The former says, "we fancied that after the *glacieres* every mountain would be easy to us, however it took us more than five Hours hard labour in getting up." The latter appears to have occupied six hours on the ascent. I look upon the Maulè, he said, "to be somewhat higher than *Montanver*, because we were half an Hour longer in going up it, although the Road is very even, as well as steeper."



GENEVA TO CHAMON

ville Church, and leads past les Tours and Aise. At the beginning it goes through woods, but the upper part is unshaded, in places is steep, and sometimes is very hot. About 1000 feet below the summit, on the Bonneville side, there is a châlet (put up in August 1891), with beds, belonging to the Section du Mont Blanc of the French Alpine Club, where tourists can obtain food and lodging at moderate prices, *if the guardian is there.* It occasionally happens that the guardian locks the place up and goes off with the key, and the tourists sit outside and anathematize him. Hence to the top is ¾ h. over grass slopes. The view from the summit is very extensive and beautiful. At the foot of the mountain on the north there is the village of St. Jéoire, and eastwards an unimpeded view over Tanninges and Samoens, with the Buet in the background (more than 30 miles away). To the right of the Buet, the range of Mont Blanc can be seen almost from one end to the other; and, down below, Cluses with glimpses of the Valley of the Arve beyond. The country round La Roche and for many miles farther away occupies the southern section of the panorama, and in the west one looks over Geneva and the Lake to the long ridges of the Jura. Though the northern side of the Môle is precipitous, it may be ascended from St. Jéoire in about the same time as from Bonneville. Mules *can* go to the top, but they are seldom taken there.

On leaving Bonneville observe that the road leading straight away from the bridge goes to La Roche, while that for Cluses turns sharply to the left. No part of the range of Mont Blanc can be seen from Bonneville,[1] nor between that town and Cluses. For the first 5 kils. the road is nearly level and perfectly straight. At 6½ kils. from Bonneville it passes through **Vougy**, with the HOTEL DE LA POMME D'OR; and 3½ kils. farther on is the village of **Marnaz**, where there are only *cafés*. Thence to Cluses is little more than 4 kils. On arriving at the main street, turn to the right if you intend to continue on *the road;* and to the left if you want to go to the *railway.*

Cluses, on the Arve (485 mètres), 1915 inhabitants; HOTEL REVUZ, HOTEL NATIONAL; is a watchmaking town, with very wide streets, and open spaces. The Watchmaking School is at the northern end. On leaving Cluses the road at first keeps to the right bank of the Arve, and rises slightly. Magland (512 mètres) is 6½ kils. from Cluses, and in 10¼ kils. more one comes to Sallanches. Four and a half kils. before arriving there the road crosses to the left bank, and shortly afterwards Mont Blanc will be seen in the distance, a little towards the left,—a magnificent view, on a clear day.

[1] Baedeker's *Guide* (15th ed. pp. 259-60) in speaking of Bonneville says "to the right we obtain a superb view of Mont Blanc, whose dazzling peaks towering majestically at the head of the valley seem to annihilate the intervening distance of nearly 30 M. The Aiguille du Goûter appears first; then, from right to left, the Dôme du Goûter, Mont Blanc itself, the Mont Maudit, Mont Blanc du Tacul, the Aiguille du Midi, and the Aiguille Verte." Readers of Baedeker are warned that not one of these peaks can be seen from Bonneville, and that they do not 'tower at the head of the valley.' Mont Blanc and its Aiguilles begin to be seen when one is about 1000 feet up the Môle. The passage is perhaps intended to describe the view from the summit.

Sallanches (540 mètres, 1772 feet), Pop. 2064. HOTEL DE BELLEVUE; *HOTEL DES MESSAGERIES.* From this place, or anywhere in its neighbourhood for several miles round in all directions, one has the finest possible views of Mont Blanc that can be had from a low level. The summit is distant 13½ miles as the crow flies, and it rises 14,000 feet above the spectator. It continues visible during part of the way to le Fayet, but at last it is shut out by the ridge leading from the Dôme du Goûter to the Aiguille de Bionnassay. Notice also the towering Aiguille de Varens (8163 feet) to the left, on the northern side of the Arve. Diligences leave Sallanches for Mégève, Albertville, Annecy, etc. The Railway-station is a third of a mile from the town. The **Pointe Percée** (9029 feet, 2752 mètres), a renowned point of view for Mont Blanc, situated to the W.N.W., distant about 2¾ miles, can be ascended from Sallanches in 4½ to 5 hours. There is a Club Alpin Français *cabane* (completed in 1899), called the **Refuge Sauvage**, on the north-west side of the Pointe Percée.

le Fayet (581 mètres, 1906 feet).—HOTEL DE LA SAVOIE; HOTEL DU PONT DE BON NANT; HOTEL DE LA PAIX; HOTEL DES ALPES; HOTEL-PENSION DU BONNANT; HOTEL-PENSION BOTTOLLIER; CAFÉ-RESTAURANT VEUVE BURNET; CAFÉ-RESTAURANT DE LA GARE; HOTEL-PENSION DE LA RENAISSANCE; HOTEL TERMINUS. The **Railway Station** is a few hundred yards off the road, on the north. At the **Buffet de la Gare** a *Repas, prix fixe* (3 frs., Wine or Beer included) is supplied from 9.45 a.m. to 3 p.m., and from 6.30 to 7.30 p.m.

The Baths and Village of St. Gervais are a short distance off. See p. 142 for Plan, etc. The (Napoleon III) **road**, which superseded the old route to Chamonix *viâ* Servoz, commences at le Fayet, and rises but slightly for the first two kilomètres. Then the gradients increase, and a good pedestrian getting down here can arrive at Chamonix on his legs almost as soon as a carriage. The autumnal tints of the foliage on this part of the route are particularly rich and brilliant. The distances are:—

le Fayet to Châtelard	7·5	kilomètres
Châtelard to les Montées	2·0	,,
les Montées to les Houches . . .	3·5	,,
les Houches to les Bossons . . .	4·0	,,
les Bossons to Chamonix	3·0	,,
	20.0	kilomètres

or about 12½ English Miles.

This **road**, 3 to 4 kils. beyond le Fayet, has risen high above the Arve, and gives a very fine view of the Plain of Sallanches and of the Aiguille de Varens. It then turns sharply to the east, and for a time the Aiguille du Midi makes its appearance in the distance. The near scenery is highly picturesque. At **Châtelard**, HOTEL DU TUNNEL DU CHÂTELARD, the diligences used to change horses. The neighbourhood is well-wooded, and one can go about at

pleasure anywhere. (This place must not be confounded with another Châtelard on the route from Chamonix to the Tête Noire.) The road here passes through a small tunnel, that intersects a Roman gallery, which was found while the tunnel was being made. At the



TUNNEL AND ROMAN GALLERY AT CHÂTELARD.

top of the steps leading to the gallery there is this inscription, '*Galerie Romaine, Decouverte en* 1863, *en construisant le souterrain.*' The part of the gallery that is now visible is only 15 paces long, about 5 ft. 6 ins. high, and 3 ft. 6 ins. wide. The road leading away on the left, after passing through the tunnel, goes to Servoz, which is seen about ¾ mile away (see pp. 110-111). In 16 or 17 min. from Châtelard, by carriage, one arrives at **les Montées**, HOTEL DES MONTÉES, 60 beds. The road hereabouts, and indeed almost all the way from le Fayet to les Houches, passes through extremely

picturesque scenery. Nothing can well be finer than the views of the Aig. du Goûter and the Aig. de Bionnassay which can be seen for several kilomètres over this part of the route. The *summit* of Mont Blanc, however, is hidden. The Hotel des Montées has woods all around it, and is another place where persons of quiet tastes can find much enjoyment. After leaving it, the road enters a sort of defile, and for some distance is carried along a shelf cut out of the face of a cliff. In 20 to 22 min. from les Montées the diligence crosses to the right bank of the Arve (Pont Ste. Marie), and after another kilomètre recrosses to the left bank (Pont de Griaz), just below the village of les Houches. Then you enter the Valley of Chamonix, the vista begins to open out, and a line of Aiguilles is seen, commencing on the right with the Aiguilles du Midi, du Plan, de Blaitière, and des Charmoz, followed by the Dru, Verte, and Chardonnet. After passing through the village of les Bossons, HOTEL DU GLACIER DES BOSSONS, the road again recrosses to the right bank, by the Pont de Perrolataz, and a few minutes later you are at Chamonix.

"The majestic glaciers, separated by great forests, crowned by granitic rocks to an astonishing elevation, carved into gigantic obelisks and intermixed with snow and ice, offer one of the grandest and most remarkable spectacles that it is possible to imagine. The cool, pure air that one breathes, so different from the stuffy atmosphere of Sallanches, the high cultivation of the valley and the pretty hamlets one passes, give the idea of a new world, a sort of Earthly Paradise." De Saussure's *Voyages*, vol. i, p. 359.

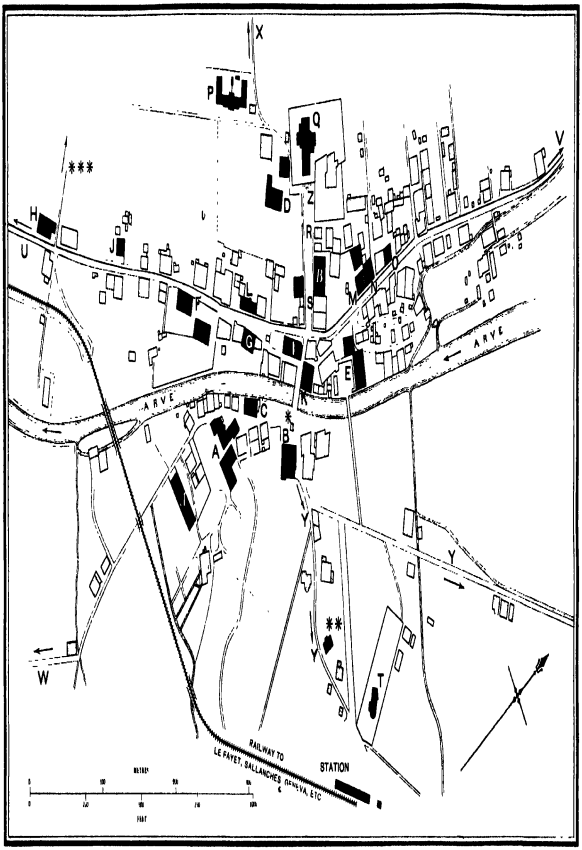
To this eulogium it may be added that everyone has perfect liberty to roam about anywhere, at will.

On leaving le Fayet, the **Electric Railway to Chamonix** bears away from the road, but after the first four kilomètres railway and road are never far apart. See the Plan at the end of the Volume. There are **Stations** at Chède, Servoz, les Houches, and les Bossons. The **Fares** between the Stations are given in the Chamonix Advertisements.



THE OLD MONTANVERT, IN 1895 (SEE PAGE 100).

PLAN OF CHAMONIX.



REFERENCES.

A GRAND HOTEL COUTTET & DU PARC
B HOTEL ROYAL & DE SAUSSURE.
C. ,, DE LA POSTE.
D. ,, DU MONT BLANC
E. ,, D'ANGLETERRE.
F. ,, DES ALPES
G. ,, DE PARIS.
H. ,, BEAU SITE.
I. ,, DE FRANCE & DE L'UNION.
J. ,, VILLA BEAU SEJOUR.
K. HOTEL DE LA TERRASSE
L. ,, SUISSE.
M. ,, DE LA CROIX BLANCHE.
N. ,, DE FRANCE
O. ,, DE LA PAIX.
P. SCHOOLS
Q THE CHURCH.
R. PLACE DE L'ÉGLISE.
S. BUREAU DES GUIDES.
T. ENGLISH CHURCH.
U. ROAD TO SALLANCHES, ETC.
V. ROAD TO ARGENTIÈRE, ETC.
W. ROUTE TO MONT BLANC.
X. PATH TO THE BREVENT VIA PLANPRAZ.
Y. ,, MONTANVERT.
Z. MONUMENT TO BALMAT.
* ,, ,, DE SAUSSURE.
** LOPPÉ'S GALLERY.
*** PATH TO THE BREVENT VIA BEL ACHAT.
A. HOTEL·PENSION BEAU·RIVAGE.
B. ,, IMPERIAL & METROPOLE.

CHAPTER IX.

UPON CHAMONIX.

CHAMONIX—ITS POPULATION— CONSEIL MUNICIPAL—REVENUE—MEANS TAKEN TO MAKE IT A POPULAR RESORT—COMMUNAL FORESTS—HOTELS—BUREAU DES DILIGENCES—SHOPS—BUREAU DES GUIDES—MAIRIE—THE CHURCH—MONUMENT TO JACQUES BALMAT—PATH TO THE BRÉVENT- SCHOOLS—THE LAITERIE—THE SHAM—MONUMENT TO DE SAUSSURE—PATH TO THE MONTANVERT—THE ENGLISH CHURCH—SULPHUROUS SPRING—PATH TO MONT BLANC—FOREST RETREATS.

THE **Village of Chamonix** is situated on nearly level ground, partly on the right and partly on the left bank of the Arve.—**Altitude,** 3412 feet (1040 mètres). It is the *chef lieu* of the Canton of the same name, which also comprises the Communes of les Houches, Vallorcine, and Servoz. It is in the Department Haute Savoie.

Population.—According to a Census taken in 1896, Chamonix (including the numerous little allied hamlets and villages) has a population of 1923; Argentière has 487, and les Houches 1028; which makes the total population of the *Valley* 3438, in 1896. It increases slowly. M. Perrin believes that so long ago as 1411 the population of the valley was somewhere about 1140, and he says it was found from a census taken in 1773 by the Chapter of Sallanches that there were 444 hearths in the valley, namely, 200 at Chamonix, 160 at les Houches, and 84 at Argentière. Allowing 5 persons to a household, this would make the population of the valley 2220, in 1773.

Each male native of the Canton of Chamonix, on attaining his twenty-first year, has the right to vote at the election of the **Conseil Municipal.** This body has 16 members. The ordinary sessions are held four times a year at Chamonix, when the Communal Budget is discussed, and questions relating to all works of public utility in the Canton. All contracts, or specifications for new roads, bridges, or schools which are proposed must be submitted to, and all disbursements proposed to be made from the Communal Funds must be sanctioned by, the Préfet of the Department.

The **Revenue** of the Commune of Chamonix is chiefly derived from the rents of the hôtels and châlets, frequented by tourists during the summer months, which are built on the upper slopes of



THE VILLAGE OF CHAMONIX, SEEN FROM THE GRANDS MULETS.

the valley. The **Taxes** paid in the Commune of Chamonix are of two classes—1. *la Taxe Immobilière*, which goes to the Canton, is levied on houses and land. 2. *la Taxe Personnelle*, which goes to the Republic. Owing to the Canton of Chamonix being situated in the '*Zone*' which was established by Napoleon III on the annexation of Savoy, there are no duties on coffee, tea, tobacco, chocolate, etc.[1]

Reparation of Paths.—Every male inhabitant of the Commune between the ages of 18 and 60 is compelled to contribute three days' labour per annum (or to furnish a substitute) in order to repair the paths leading to the various points of interest in the Valley. Everyone who has a horse, mule, or cart, must also place them at the disposal of the Commune for three days each year, for the same purpose. The mules are all registered (the numbers being stamped on the hoof of the near fore-foot), and in the event of war or mobilization they would be placed at the service of the State. They are inspected annually by an Officer of the French Army.

Communal Forests.—Every year, a certain number of trees in the Communal woods are marked by the *Administration des Forêts*, and are felled and divided among those ratepayers who have applied for a share. A nominal sum is paid to the Commune for the price of the wood; and the cost of felling the trees and bringing them down to the valley is borne by those who participate in the distribution. In Chamonix there is very little land used as Communal grazing ground, where the ratepayers have the right to send their cattle.

The **Voters** in the Canton of Chamonix are represented by a 'Conseiller d'Arrondissement' at Bonneville, who is elected for six years; and also by a 'Conseiller-Général' at Annecy who remains in office for the same period. The **Maire** is elected by the Conseil Municipal for four years.

Hotels on the left bank.—GRAND HOTEL COUTTET & DU PARC HOTEL-PENSION COUTTET (large and well-conducted, with good gardens; baths and dark room); HOTEL-PENSION DE LA POSTE; HOTEL BEAU RIVAGE; HOTEL ROYAL. **On the right bank.**—HOTELS CACHAT & DU MONT BLANC (large and good; gardens, with chamois); HOTEL DES ALPES (large and good; glazed verandah in full view of Mont Blanc and the Aiguilles); HOTEL BEAU-SITE (large gardens); HOTEL DE PARIS; HOTEL IMPÉRIAL & MÉTROPOLE (central); HOTEL SUISSE; SAVOY HOTEL; HOTEL DE LA PAIX; HOTEL DE CHAMONIX (central); HOTEL DE LA MER DE GLACE (northern end of the village); HOTEL DE LA CROIX BLANCHE; HOTEL VILLA BEAU SEJOUR; HOTEL DE FRANCE, DE L'UNION, & TERMINUS; HOTEL DE LA TERRASSE; HOTEL D'ANGLETERRE; HOTEL DE L'EUROPE; HOTEL-PENSION BALMAT; HOTEL CENTRAL; HOTEL MODERNE & VICTORIA. Porters from the Hotels meet the Trains, and will arrange for transport of baggage.

[1] The prices printed on the labels of packets of French tobacco and cigars are the prices for France in general, but in the 'free zone' they should be supplied to the purchaser *less duty*.

Chamonix is lighted by electricity, and most of the Hotels are on the Telephone. The main street, running right through the village, is called the **Rue Nationale,** and the large open space leading from it at a right angle towards the Church is the **Place de l'Eglise.**

The Station of the Electric Railway is on the left bank, close to the English Church.

In engaging **carriages for Martigny,** if one wishes to go to the Railway-Station at Martigny, it is well to stipulate expressly in writing or in the presence of witnesses to be conveyed to Martigny *Railway-Station.* If this is not done, attempts at imposition are sometimes made by the voituriers, who interpret the contract to mean that the traveller has to descend at some *hotel* at Martigny, and try to extort an additional sum for going to the Railway-Station.

There are numerous **shops** in Chamonix where all travelling requisites can be obtained, the chief part of which are in the Rue Nationale and on the Place de l'Eglise; and there are several good ones where **crystals** and local products are displayed.[1] At the shop of **M. Félisaz** in the Rue Nationale, Crosse & Blackwell's and Huntley & Palmer's goods are kept; 8 different kinds of Whiskeys, Liebig's Extract, pâtés, puddings, etc. Money, Letters of Credit, and Circular Notes can be changed or paid at the establishment of **M. Paul Payot,** Rue du Pont, who also deals in photographs, etc. etc. Mountain boots can be had from **M. Ducrey.** The **Post Office** is in the Rue Nationale, nearly opposite to the Hotel de la Croix Blanche.

A few doors down the north side of the Place de l'Eglise there is the **Bureau des Guides.** The Guides of Chamonix have formed themselves into an Association called "La Compagnie des Guides de Chamonix," which makes rules for its members and regulations for tourists. The Bureau is a great convenience (but is not used as much as it might be), as all information can be obtained there about Guides, Porters, Mules, Prices, and anything relating to excursions which are upon the list. The Guide Chef, who presides in the Bureau, is always ready to give information, and will be able to say what Guides are available. Many of them do not inhabit Chamonix itself, and not a few live so far away as Argentière and le Tour. It takes time to summon them, but this will be done by the Guide Chef. The 'Tarif' of Excursions is given in Appendix B.

The repetition of the family names is often a cause of perplexity. The list given in Appendix F will go some way towards enabling a traveller to pick out the guide he wants, as it gives their ages, their villages, and other information. It has been corrected by M. the Guide Chef. See Appendix A for a List of Villages and Hamlets in the Valley of Chamonix.

[1] Including Honey. Everyone who has written about Chamonix, from Peter Martel onwards, has spoken about its honey, which is considered to be of a very superior quality. Large quantities of genuine honey of the valley are used in the hotels; but although 'Chamonix honey' is on sale in many of the principal cities of Europe, I have been unable to learn that any is *exported* from Chamonix.

The Mairie is in the same building as the Bureau des Guides. In the Archives there are a large number of documents of the 15th, 16th, and 17th centuries, including records of lawsuits and local squabbles, amongst which there is evidence of a considerable amount of friction between the Syndics of Chamonix and the Canons of Sallanches. Many early documents, I am informed, perished by being transported for safety to Fort du Bard. An interesting relic is



BUREAU OF THE GUIDE CHEF.

preserved in the Mairie, namely the initials of Jacques Balmat carved upon stone. This was discovered in 1898, upon the upper rocks of the Grands Mulets, by a workman who was employed on the construction of the new Hotel.

Chamonix Church is situated at the north-western end of the Place. According to M. Perrin, there were five Chapels in the Church of the Priory (Notre-Dame, St. Félix, St. André, St. Sébastien, and St. Jean-Baptiste). The Chapel of Notre-Dame is incorporated in the existing

Church, and this appears to be almost the sole remaining relic of the Priory. Upon the northern side of the Church, there are the graves of the Rev. G. McCorkindale, and of Mr. Bean, to which reference was made upon page 56. Visitors are admitted to the Church at all reasonable times. Chamonix is in the Diocese of Annecy.

Monument to Jacques Balmat.—In front of the Church there is a monument to Balmat (see p. 18), bearing the following inscription :—

La Societé Geologique de France avec le concours du Club Alpin Francais Semptembre 1875-Aout 1878.



CHAMONIX CHURCH.

The Path to the Brévent starts on the western side of the Church After a few minutes (across fields) it divides,—the left hand branch leads to the Brévent *viâ* Bel Achat, and the other goes *viâ* Planpraz

Schools.—The large building to the west of the Church was erected by the Commune. Considerable sums have been spent from the Communal funds, for a number of years, over the erection o new school buildings. Instruction in English is given.

In the Rue Nationale, on the same side as and close to the Hotel des Alpes, there is the **Laiterie de Chamonix,** belonging to a Co-operative Society founded in 1891, with a capital of 18,000 francs The object of this institution is to enable householders to have the

milk of their cows and goats converted into butter and cheese by the most scientific processes, and by the newest and most approved apparatus, which would be impossible for any private individual to provide for his own use. Every morning and evening about 100 persons send their milkings to the Laiterie. The amounts are carefully measured and recorded in a Register, and also in a pass-book which the householder keeps as a check. During the course of the year the butter and cheese are sold from time to time; and, after the expenses of the Laiterie are paid, the profits are divided amongst those who have taken part in this system of Co-operation. The Director holds a Diploma from one of the Government Agricultural Schools. In 1894, 130,000 litres of milk were received, which are said to have yielded 10,400 kilos. of cheese and 1900 kilos. of butter.

The Sham Picturesque.—Between the 2nd and 3rd kil. stone from Chamonix on the road to Sallanches there are some *sham ruins* and *sham rocks*, worthy of the best days of Rosherville Gardens. Strangers arriving at Chamonix are frequently gulled by them, and suppose they are the ruins of 'the Priory.' A closer approach shews that they are made of lath and plaster. Though this piece of folly (which is said to have been perpetrated by an Englishman) has little that is attractive for sane persons, a visit to the place is not altogether loss of time, merely to see its artificial pool, with *real water*, but of such exquisite purity that one suspects it to be an ingenious fraud.

On the left bank of the Arve, on crossing the bridge, one sees in the centre of the open space in front of the Hotel Royal a **monument to De Saussure.** The Professor is represented in a costume resembling that of a General of the Revolution of 1789, and Jacques Balmat is inspiring him to ascend Mont Blanc by pointing away from the mountain. M. Chenal bequeathed 4000 francs for the erection of a monument to De Saussure in the Commune of Chamonix. The Commune added 4000 francs to the legacy, but feeling that larger sums were necessary to erect 'un monument digne de ce savant Génévois,' appealed to outsiders to assist. The French Academy of Sciences granted 500 francs, and the Conseil-Général of the Department gave as much more. This was supplemented by contributions from the French Alpine Club and by private persons, and upon Aug. 28, 1887, the monument was unveiled, with much ceremony.

A bust of the late **Charles Durier** has been set up on the northern side of the road leading to the Railway Station.

The Path to the Montanvert commences at the lane on the left hand (northern side) of the Hotel Royal. A few yards past the hotel the road divides—one branch goes straight on, and the other turns off to the left. This latter in about three minutes turns sharply to the right, and rejoins the other path. The two ways are used about equally. A few yards down the former, one comes to the *atelier* of **M. Tairraz,** *the* photographer of Chamonix; and just beyond his establishment there is the **Gallery of Alpine Paintings by M. Gab. Loppé.** Admission free.

The English Church is a little farther on, upon sloping ground overlooking Chamonix. The interior of this building is distinguished

by naked simplicity. It wants colour, and the walls more broken up. It contains three tablets; one in memory of Albert Smith (see pp. 43-45), another to his brother Arthur, and the third to Capt. Arkwright (see p. 53), which bear the following inscriptions.

"To the Memory of Albert Smith, who died on the 23rd of May, 1860; in the 44th year of his age. This tablet is erected here in the English Church at Chamounix by his affectionate brother Arthur Smith."

"In Memory of Henry Arkwright, born Dec. 16, 1837, fourth son of John Arkwright of Hampton Court in Herefordshire, Capt. in H.M. 34th Regt. of Foot and Aide de Camp to the Lord Lieutenant of Ireland. He was lost in an avalanche while ascending Mont Blanc, October 13, 1866.—He shall give his Angels charge over thee they shall bear thee up in their hands."

At the back of the Church, close to the Montanvert path, is the grave of Mr. Nettleship (see pp. 61-63), with this inscription:—

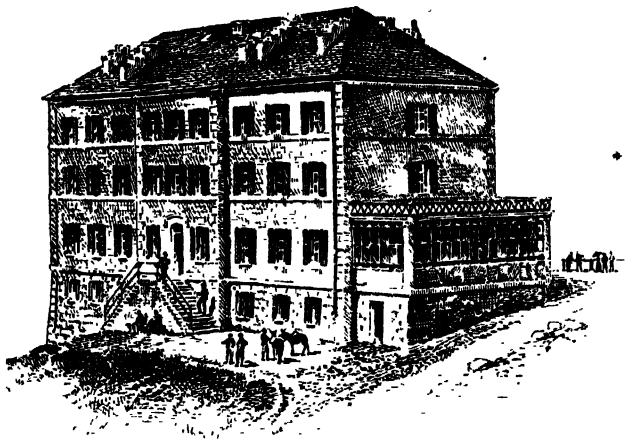
Richard Lewis Nettleship Fellow and Tutor of Balliol College, Oxford. Born December 17, 1847, Died on Mont Blanc, August 25, 1892.—He maketh the storm a calm.

Admittance to the English Church can be obtained on application at the Hotel d'Angleterre, where the keys are kept.

A little farther on, up the valley, there is a **Sulphurous Spring.**—Take the path to the Montanvert that is nearest to the Arve, and, after walking about five minutes, the smell will guide you to the Spring. It bubbles out in a meadow a few yards off the road, on the right hand, or eastern side. No use is made of the water. Formerly it issued a few hundred yards higher up, and the Commune erected a small building over it. The water runs into a neighbouring brook, and its odour can be smelt a long distance away. Although the stones round the source are encrusted with sulphur, the taste of the water is not strong enough to be unpleasant. The temperature at the source is 50° F. This spring was visited by Peter Martel, who remarked of it (in the French version of his narrative)—

"A word must be said about a spring one comes across in going up the mountain, which yields a very good mineral water, containing iron and sulphur. It is a pity that it is not more abundant, for it is delicious and very cool it is the first that one finds on the way to the Montanverd."

The Path to the Pierre Pointue, and for the ascent of Mont Blanc leads from the De Saussure monument past the Hotel de la Poste, and in about three minutes turns sharply to the right. Both on this route, on the Planpraz way to the Brévent, or upon the path to the Montanvert one can get in ten minutes into the shade of forests; but the most charming of all **forest retreats** within a few minutes of Chamonix is arrived at by taking the path to the Montanvert which is nearest to the Arve, and by continuing along it towards the end of the Mer de Glace (over nearly level ground), instead of turning upwards towards the Montanvert. For those who love quiet, who are unable to put forth exertion, and who are not insensible to the beauties of nature, the **Forest of Bouchet** is the place.



HOTEL DU MONTANVERT.

CHAPTER X.

EXCURSIONS FROM CHAMONIX.

THE MONTANVERT AND THE MER DE GLACE—THE CHAPEAU—ASCENT OF THE BRÉVENT—THE FLÉGÈRE AIGUILLE DE LA FLORIAZ—ASCENT OF THE BUET—THE COL DE BALME AND THE TÊTE NOIRE—FISHING FOR ÉCREVISSES—SERVOZ THE GORGE OF THE DIOZA—COL DE VOZA—PAVILLON BELLEVUE—ST. GERVAIS—GLACIER DES BOSSONS—GROTTO DES BOSSONS—BALMAT'S HOUSE—CASCADE DU DARD—PIERRE POINTUE—PLAN DES AIGUILLES—PIERRE À L'ECHELLE—GRANDS MULETS—MONTAGNE DE LA CÔTE—CASCADE DE BLAITIÈRE.

SINCE the establishment of the new Montanvert Hotel, and the *auberge* at Lognan (in place of the old châlet), it has become customary for those two places to be used as starting-points for many excursions which were formerly made from Chamonix. There still remain, however, a number of excursions for which the Village is the centre, and first of all must be placed the '*course*' to the **Montanvert** and **Mer de Glace (Cx. T. 5, 6, 27, 29).**[1]

The path commences at the side of the Hotel Royal (see p. 97), passes the group of houses called les Mouilles, and, about one quarter way up in time, arrives at a refreshment shed named Planard (les

[1] The abbreviations in **antique** type in the following chapters (**Cx. T. 5, 6, 27,** and so on) are references to the Chamonix 'Tarif des Courses,' which is given in Appendix B. The numerals correspond with the Numbers which are affixed in the List to the various Excursions.

The *times* quoted in this and in the following chapters are actual going times, exclusive of halts.

Planaz). After this, nearly all the way is through forest, by a fair path. At the Source de Caillet (4879 feet), which is rather more than half way up in time and exactly half way in height, there is another refreshment shed, which is the last place where drinks can be had, either artificial or natural, until the Montanvert. Near approach to it is indicated by the trees becoming thinner, and when this happens you have before you the lower end of the Mer de Glace, or Glacier des Bois, as it is termed,[1] and the Aiguille du Dru, which is, of its kind, the most striking object in the Range of Mont Blanc. The path then bears to the right, and you presently arrive at **the Montanvert Hotel** (6303 feet), which occupies a prominent and commanding position on the left bank of the Glacier. Time ascending, 2 hs. 20 min. going steadily. In descending, 50 minutes is quick time.

The Hotel du Montanvert is plain in appearance, but is more comfortable than one would expect from its exterior. Pension from 9 to 10 francs a day; rooms, 3 to 4 francs; Déjeuner, café complet, 1.50, Lunch 3 fr., Dîner 5 fr. The first shelter that was erected at this place was a shepherd's hut, which the Chamoniards called 'the Château.' This primitive abode was succeeded by a *Pavillon* which was put up in 1779 at the expense of an Englishman named Blair, living at Geneva. Prof. J. D. Forbes says the *Pavillon* or *Hospital* was superseded in 1795 by the building dedicated '*à la Nature*,'[2] that is still in existence (used now as a store-house). This, in its turn, was abandoned when the first (or old) Montanvert inn was opened in 1840; and that very humble building served its purpose until 1870, when the present Montanvert Hotel was completed. There has thus been the following succession of edifices—The 'Château,' 'Blair's Hospital,' 'A la Nature,' 'the Old Montanvert,' and the present Hotel. For Illustrations of the two latter, see pp. 90, 99.

There is a diversity of opinion regarding the proper manner of spelling the name Montanvert. Some writers use Montantverd, others Montainver, or Mont-Anvert, Mont-Tanvert, Mont-Tainvert, Mont Anver, Montanvers, Montenvers, Mont-Invers, and Mont-en-Vert. Bourrit said (in 1785) "it is called the Montanvert because pasturage is found there, the verdure of which contrasts beautifully with the horrors of the icy valley." Mons. C. Durier adopts quite a different view.[3]

[1] I have not heard it stated where the Mer de Glace ends and the Glac. des Bois begins. It will be convenient to consider that all below the Montanvert should be termed the Glacier des Bois.

[2] "In one of Link's excellent coloured views (published at Geneva) entitled 'Vue de la Mer de Glace et de l'Hopital de Blair, du Sommet du Montanvert dans le mois d'Aoust 1781,' a regularly built cabin, with a wooden roof, is represented, with this inscription over the door:—

"BLAIR'S HOSPITAL.
UTILE DULCE."

"At a later period, a small solid stone house of a single apartment, was built at the expense of M. Desportes, the French Resident at Geneva, having a black marble slab above the door, with the inscription *A la Nature*. On my first visit to Chamouni this was the only building, but soon after a much more substantial and effectual shelter was erected at the expense of the *Commune* of Chamouni, and is let to the present tenant, David Couttet (together with the grazing round), for the considerable sum of 1400 francs." *Travels through the Alps of Savoy*, by James D. Forbes, F.R.S., Edinburgh, 1843.

[3] See his *Mont Blanc*, chapter ix.

The appearance of the **Mer de Glace** from the Montanvert must be known to everyone from photographs and drawings. The position occupied by the Hotel is one of the very best that could be selected for viewing this famous Glacier, and the *coup d'œil* out of the upper windows upon a fine moonlight night is a thing to be seen. With the greater part of the Glacier in gloom, and only the crests of the icy waves sparkling and glittering, it is easy to imagine that the Mer de Glace is a frozen sea. The Hotel is the property of the Commune, and the Lease is put up to public competition. The Lessee is bound to maintain 'the crossing' at the Mer de Glace, and the paths along the moraines, in the best possible condition, and to employ a *cantonnier* expressly for that purpose. He has right of pasturage gratis for a certain number of animals, and *upon no account is to varnish his furniture!* The water supplied at this Hotel is very bright and good. It is conveyed through leaden pipes from a spring a little above 'les Ponts.' The 'old' Montanvert[1] is close alongside the present Hotel (see Illustration on p. 90), and has the temple dedicated to '*la Nature*' behind it.

The view from the windows of the Hotel embraces the portion of the Glacier which has been rendered classical by the labours of Forbes and Tyndall. In 1842, Principal J. D. Forbes commenced his investigation of the motion of glaciers, and initiated the method of measuring the surface-movements of the ice by means of a theodolite. He determined the velocity at various places, in the centre, and at the sides; and discovered that movement continued day and night; that the higher part of the glacier (its feeder the Glac. de Léchaud) moved *slower* than the lower part near the Montanvert; and that the central part of the glacier moved *faster* than the edges in a very considerable proportion. Forbes' investigations were continued by Dr. John Tyndall in 1857; and extended in 1859, on Dec. 28-29, by measurements of the *winter* movements of the glacier, opposite to the Montanvert. In summing up the results obtained by themselves and others, Tyndall said, "the *proof* of the quicker central flow belongs in part to Rendu, but almost wholly to Agassiz and Forbes; the proof of the retardation of the bed belongs to Forbes alone; while the discovery of the locus of the point of maximum motion belongs, I suppose, to me." Forbes' *Travels through the Alps of Savoy*, and



PRINCIPAL JAMES D. FORBES.

[1] This shabby little structure has received many eminent persons and personages, including the Emperor Napoleon III and the Empress Eugénie.

Tyndall's *Glaciers of the Alps* will be found interesting to read during a stay at the Hotel.

For excursions to the upper end of the Mer de Glace, or in the basins of its tributaries the Glacs. de Talèfre, de Leschaux, and du Géant, take the path which leads past the 'old' Montanvert. This path rises at first, and in a few minutes one comes to '**les Ponts**,' which are a series of steps cut on the face of steeply inclined rocks, a considerable height above the glacier. Iron handrails are provided. The path then descends to the lateral moraine of the left bank, which is followed for a short time. Many of the boulders here are insecurely poised, and caution should be exercised. The track from this point to the *upper* end of the glacier is laid down on the map. One can *return* to the Montanvert down the centre of the glacier, and obtain good practice in cutting amongst its contorted and fissured ice; but, more usually, tourists return by 'les Ponts.'



PROFESSOR JOHN TYNDALL.

The Aiguille du Dru, 12,317 feet, on the opposite side of the Mer de Glace, is incomparably the most striking object that is seen from the Montanvert, and the views of it which can be obtained from this direction are the finest one can find. The Aiguille is imposing in two senses. It *appears to be the culminating point of the opposite block of mountains*, when, actually, it is only a pinnacle upon one of the ridges of the Aig. Verte (see the illustrations upon pages 106, 121). The real summit of the Dru cannot be seen from the Hotel. When looking up the Mer de Glace, the highest points which are seen at the end of the vista are the **Grandes Jorasses**, 13,799 feet, the loftiest mountain in the range after Mont Blanc itself (on the left); **Mont Mallet**, 13,084 feet (about the centre), with the **Pic du Tacul**, 11,280 feet, in front of it; and the **Aig. du Géant**, 13,156 feet (on the right). The highest point of the Grandes Jorasses cannot be seen from this side. It is behind the left hand of the two peaks which are visible. The great wall of the Grandes Jorasses is more than 5 miles from the Montanvert, and requires closer approach to be appreciated; and the same may be said of the Aig. du Géant, which, *near at hand*, looks a most impudent pinnacle. The **Aig. des Charmoz**, 11,293 feet, is the principal feature on the left bank of the Mer de Glace.

The path to '**the crossing**' starts from the back of the Hotel; and a few yards off it, on the land side, just before it arrives at the ice, there is the large block of rock called '**the Englishmen's Stone**,' inscribed "Pocock et Windham 1741." See Illustration upon page 1.



THE AIGUILLE DU DRU.

The track across the glacier is sufficient guide to the other side. The crossing can be effected in 10 min., or less. There is a refreshment shed on the right bank.

In returning to Chamonix one can go *viâ* '**the Chapeau**,' 5082 feet, and the end of the Glacier des Bois to see the source of the Arveyron, instead of going back by the Montanvert path.[1] At first the way lies along the moraine on the right bank, and then by '**the Mauvais Pas**' across the face of some precipitous rocks. Rails to hold are fastened along the parts where a slip would be objectionable. There is a building for refreshments at the Chapeau that is an *annexe* to the Montanvert Hotel. Time from one to the other about 1 h. 20 min. The place takes its name from a rock called 'the Chapeau' which is said to have been used formerly by chasseurs for bivouacs. Tyndall says of the view—

"The scene to my right was one of the most wonderful I had ever witnessed. Along the entire slope of the Glacier des Bois, the ice was cleft and riven into the most striking and fantastic forms. It had not yet suffered much from the wasting influence of the summer weather, but its towers and minarets sprang from the general mass with clean chiselled outlines. Some stood erect, others leaned, while the white *débris*, strewn here and there over the glacier, showed where the wintry edifices had fallen, breaking themselves to pieces, and grinding the masses on which they fell to powder." *Glaciers of the Alps*. pp. 39-40.

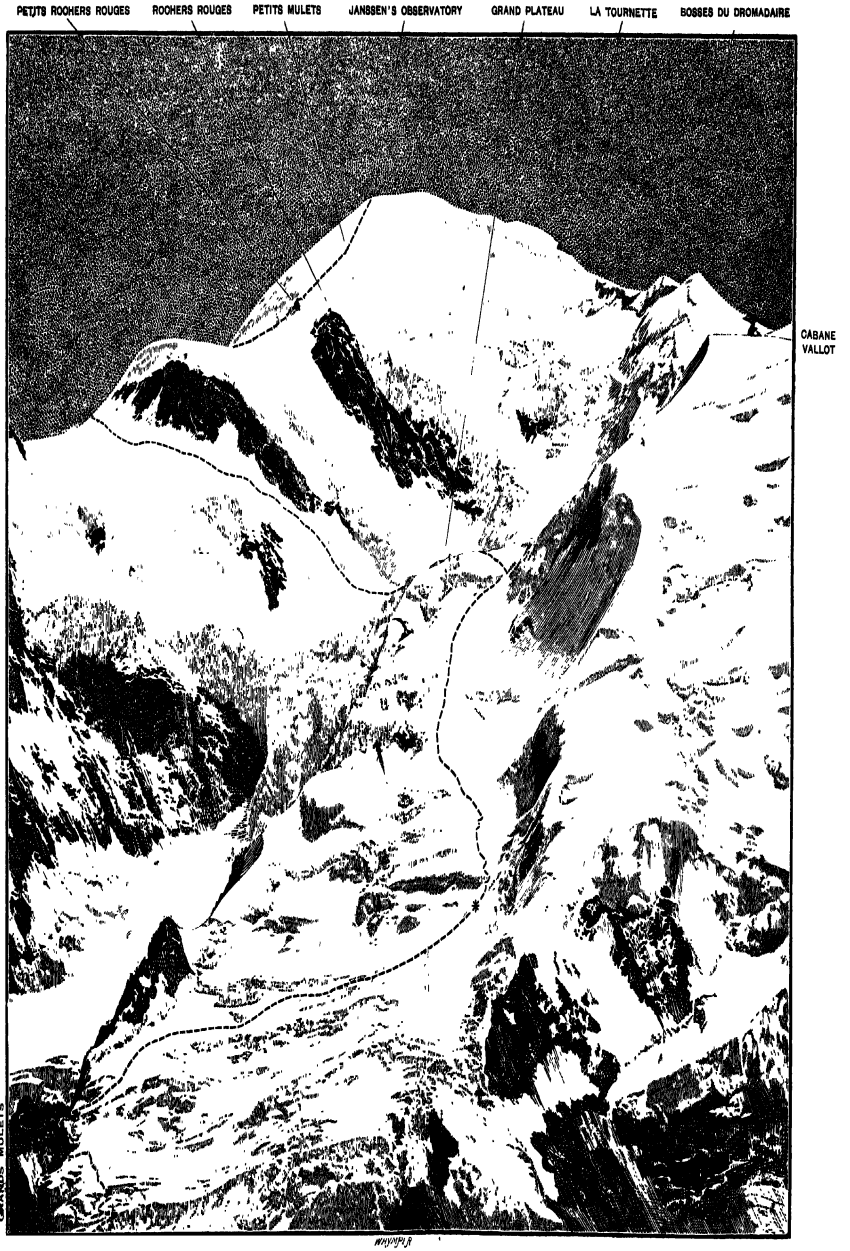
From the Chapeau a mule path leads down through beautiful forest to the terminal moraine of the Glacier des Bois. To visit the source of the Arveyron bear round to the left, on arriving at the moraine. Return to Chamonix can be effected from this spot either by passing through the hamlet of les Praz, and thence along the high road; or, more directly, by the path through the forest of Bouchet, and the left bank of the Arveyron and Arve, of which I have spoken on page 98. Time Chapeau to Chamonix about 1 h. 30 min.[2]

The Ascent of the Brévent, 8284 feet **(Cx. T. 8, 9, 10, 11)**, must not be omitted by a visitor to Chamonix. There are two ways,—one *viâ* **Planpraz**, and the other by **Bel-Achat**. The former starts against the church, and mounts 2000 feet or so through forest. The rest of the way is shadowless. At **Planpraz**, 6772 feet, there is a Pavillon (erected in 1896) where refreshments and beds can be had. Time from Chamonix about 2 h. 20 min. From this place one can pass over into the Valley of the Dioza, but there is no advantage in doing so, as the Dioza can be reached more easily *viâ* Servoz. At Planpraz the path to the Brévent turns to the left (West), and gets round to the back of the peak. On the latter part of the way, irons are fixed in some places to assist the tourist. The top of the Brévent is large, and there is a restaurant on the summit (opened in 1898), with reasonable prices. Time from Planpraz about 65 min. **The path viâ Bel-Achat** commences on the right hand side of the Hotel Beau-Site.

[1] Or one can return most of the way to the Source de Caillet, and then take a path on the right which leads to the foot of the Glacier des Bois.

[2] One can also return to Chamonix from the Chapeau by a path which leads through the hamlet Lavancher, HOTEL-PENSION BEAU-SÉJOUR, to les Tines, on the high road. From les Tines to Lavancher takes 15 min.

in the middle of the season. The path terminates soon after the



MONT BLANC, FROM THE BREVENT,

FROM A PHOTOGRAPH BY EDWARD WHYMPER.

The first part of the way for about ¾ h., through the hamlet of les Mossoux and forest, rises gently; it then steepens, but continues through well-shaded forest. Shortly after emerging from the trees, one passes a Châlet, **Plan-Achat** (5164 feet, Vallot), and thence the ascent to **Bel-Achat** (7067 feet, Vallot), HOTEL-RESTAURANT, is rapid, with many zigzags. Chamonix to Bel-Achat takes about 2 hs. 40 min. going gently. Mules can be taken from Chamonix to the top of the Brévent, by the Bel-Achat route, in about 4 hs. 20 min. From the Summit to Chamonix, *viâ* Planpraz, occupies about 1 h. 40 min., or *viâ* Bel-Achat about 2 hs.

The view of Mont Blanc from the Brévent is the finest *near* one that can be had on this side. The best point for seeing the routes which are ordinarily taken, and for watching ascents, is about half way up between Bel-Achat and the top. The accompanying view is taken from that point. Mont Blanc looks its best under afternoon light (after 3.30 p.m.). The Brévent gives its name to the entire range or *massif* between the valley of Chamonix and that of the Dioza, that includes several other excellent points of view, of which the most frequently visited is

The Flégère, 6158 feet, Vallot **(Cx. T. 7, 9, 11).** Until 1903, the usual way to the Flégère was along the high road to Argentière as far as the village of les Praz. The mule-path left the road on the left, a little beyond the village. In 1903, a new and more direct path was made from Chamonix to the Flégère, which passes through forest and is in shadow most of the way. It commences close against the northern side of the Villa Vallot. The hotel at **la Croix de la Flégère** is called HOTEL-PENSION DE LA FLÉGÈRE. The view of Mont Blanc from this place is interesting from shewing the long distance the summit is set back from the valley, and the relative positions and importance of various points on the mountain. *The* feature of the view from the Flégère is the fine view of the Aig. Verte and the Mer de Glace, on the opposite side of the valley. Time Chamonix to la Flégère is about 2 hs. 25 min.; descending, 1 h. 15 min. is pretty quick time. [A rather rough path leads from la Flégère to la Joux, on the high road to Argentière.] The ascent of the Brévent is often combined with a visit to the Flégère (there is a path between the two places). From la Flégère to the top of the Brévent can be done in 3 hs., going gently. From the top of the Brévent to la Flégère takes about 2 hs. 40 min.

The **Aiguille de la Floriaz,** or Floria, 9450 feet **(Cx. T. 14),** N.W. of the Flégère, is (excepting one of the peaks of the Aigs. Rouges, now called the Belvédère, 9731 feet, Vallot) the highest point of the range of the Brévent. It is superior as a point of view to the Flégère, and the panorama from its summit is somewhat similar though inferior to the view from the Buet. This ascent affords a good introduction to more considerable ones, and is becoming popular. It is usually made from Chamonix, but it is better to *start* from the Flégère. A path at the back of the Hotel leads to the Châlet de Floriaz, 7792 feet, Vallot (refreshments and beds), which is only open in the middle of the season. The path terminates soon after the



THE AIGUI VERTE AND AIGUI DU DRU, FROM ABOVE THE ÉGÈI

Châlet is passed, and the way then leads over debris and snow-beds to a Col between the Aig. de la Floriaz and the Aig. de la Glière. On leaving the Col turn to the right up a rocky *arête*, and follow it, or the snow on the western side,* to the top. The summit is a cone of snow. Time from Flégère to summit about 3 h. 50 min.; summit to Flégère 1 h. 45 min., moving briskly.

The Buet, 10,200 feet, can be ascended from several directions. The easiest and quickest route from Chamonix is *viâ* Argentière, the Col des Montets, and the Valley of Bérard **(Cx. T. 40)**. **The road to Argentière** leads out of the N. end of Chamonix, and at **les Chables** crosses to the left bank of the Arve. At **les Praz** (2 kils.), HOTEL SPLENDIDE; HOTEL NATIONAL PENSION; HOTEL DU CHÂLET DES PRAZ, it divides. Take the road to the left. At **les Tines** (4 kils.), RESTAURANT ET PENSION DE LA MER DE GLACE, it commences to rise, and in 2 kils. more passes **les Iles** and **Grassonet**, HOTEL DE GRASSONET; at 7 kils. **Chauzalet** (Chosalets), and recrosses to the right bank; and at 8 kils. from Chamonix arrives at **Argentière**, 4118 ft., Vallot, HOTEL DE LA COURONNE; HOTEL PENSION BELLEVUE; HOTEL-PENSION DU GLACIER & TERMINUS; HOTEL DE LA GARE; HOTEL DU PLANET, 20 min. from the Village. Time from Chamonix to Argentière about 65 min. riding, or 80 min. on foot. A short kil. beyond Argentière the road to le Tour and the Col de Balme goes away on the right. Our road inclines to the left, and mounts in zigzags (which a pedestrian should cut) past the hamlet of Trélechamp to the **Col des Montets**, 4700 feet. [The ascent of l'Aiguillette can be made from Trélechamp—path most of the way.] At about 2½ kils. from Argentière there is the HOTEL DES MONTETS, but after that there is no other hotel until the HOTEL PENSION DU BUET, at the entrance of the Val Bérard. This latter hotel is *said* to be at Vallorcine, but the village of that name is more than a mile farther on. The group of châlets at the entrance to the Val Bérard is called **la Poya**, 4318 feet. Walking time from Argentière to la Poya is a little under 1 hour.

The course up the **Val Bérard** is at first a little S. of W., and follows the right bank of the valley. In 40 min. it crosses to the left bank, and keeps on that side until **Pierre à Bérard**, 6332 feet, at which spot there is an erection that can hardly be called either hotel, restaurant, or refuge. It has beds, and a reputation for high charges. This place is at the head of the valley, which here opens out into a *cirque*. Mules can go so far. The stream is called **Eau de Bérard**, and is beautifully clear, with pools large enough for bathing. After passing Pierre à Bérard, the track mounts steeply, due W., for about 1000 feet, and then turns to the N., and skirts the eastern side of the Aig. de Salenton. The Buet is now seen, but a direct course is not shaped for it. The route usually taken bears round to the N.W., and mounts sometimes over solid rock or grass, but generally over debris with occasional snow-beds (incipient glacier) to a spot which overlooks the valley of the Dioza; and then turns N.E. over rocky ground (which has a strongly marked track, almost a path) to the lower and western end of the summit-ridge. Snow and glacier on the Buet have diminished of late, but it is

still advisable to employ a rope. The ascent of the Buet is a *walk* from beginning to end. There is no climbing. Time from Pierre à Bérard to the summit about 3½ hours.

The view from the Buet of the Range of Mont Blanc is one of the very finest that can be had from *any* position. It is more comprehensive than that from the Brévent, and more picturesque than that from the Aig. de la Floriaz. The range of the Brévent occupies the middle distance, and contrasts forcibly with the snow-fields and glaciers of the Great White Mountain. In other directions the view is very extensive, and embraces many of the highest peaks of the Pennine Alps. Geneva can be seen, and the Jura beyond. The Buet was first ascended *viâ* the Val Bérard by Bourrit, and the excursion is referred to by him in his *Nouvelle Description*, chap. xvi. The mountain had previously been ascended by M. de Luc from Sixt. See Dent's *Above the Snow-line*, chap. viii., for sunset from the Buet.

The *descent* may be made to the Hotel du Buet in 2 h. 40 min., or less. Thence to Chamonix on foot will occupy about 2 h. 15 min. Although the Ascent of the Buet is upon the Chamonix *Tarif des Courses* as an *one-day* excursion, few persons make it on foot in one day; for with a moderate allowance for halts it occupies 15 to 16 hours. Starting at 2 a.m., one would return at 6 p.m. This will be seen from the following table.

	h.	min.
Chamonix to Argentière	1	20
Argentière to Hotel du Buet		55
Hotel du Buet to Pierre à Bérard	1	50
Pierre à Bérard to summit	3	30
Summit to Hotel du Buet	2	40
Hotel du Buet to Argentière	1	
Argentière to Chamonix	1	15

Over the Col de Balme, returning by the Tête Noire (Cx. T. 35-39), is a good excursion for a pedestrian, and is preferable to going by the Tête Noire and returning by the Col de Balme. For the road to Argentière see page 107. Five or six min. after passing that village the road crosses a wooden bridge to the left bank of the Arve, and in a little more than half an hour arrives at **le Tour,** 4695 feet. The carriage-road ends there. The rest of the way, over the Col de Balme to Trient, is mule-path. The inn on the Col de Balme can be seen from le Tour. *In bad weather* the telegraph posts give a clue to the right direction, most of the way. From le Tour to the Col takes about 1 h. 40 min. Rather more than half way up, one passes 7 cow-sheds called **Balme,** which appear to give the name to the Col. Here are the sources of the Arve. On the summit of the pass there is the HOTEL SUISSE DU COL DE BALME (7231 feet).

The proportions of Mont Blanc, and the relative importance of the various Aiguilles are better seen from the Col de Balme than from the Brévent or the Flégère. The view on the French side is very fine. Commencing on the right there is the Buet, then the Aigs. Rouges (craggy and precipitous), the slopes of the Brévent, the whole length of the Valley of Chamonix from the village of Frasserans to the Col de Voza, the Aig. and Dôme du Goûter, Mont Blanc itself,

the Aig. Verte with its supporters les Droites and the Aig. du Dru, and on the left the Aig. du Tour. "Je restai," said Alexandre Dumas, "une heure anéanti dans la contemplation de ce tableau, sans m'apercevoir qu'il faisait quatre degrés de froid." The view to the north is less interesting. The path seen to the right leads to the Trient Glacier; the prominent block of mountains beyond it is the Pointe Ronde. Near at hand, on the left, the grassy slopes culminate in the point called the Croix de Fer, 7478 feet. It is only a few hundred feet above the Col, and can be reached by anyone.



HOTEL SUISSE DU COL DE BALME.

On the first part of the *descent* on the N. side the course is N.E. It presently enters forest and becomes N. In less than an hour one can go from the Col to the bottom of the Valley of Trient. On arriving at the bridge of Peuti, do not cross the stream. Keep on the left bank, and go over the bridge at Planet, a kil. lower down. In five min. more one strikes the carriage-road, coming from the Forclaz, at Gillot; and, shortly afterwards, arrives at the GRAND HOTEL OF TRIENT, 4249 feet (opened in 1899). Thence to the HOTEL DE TÊTE NOIRE (3920 feet) is $2\frac{1}{2}$ kils. Time from Peuti less than an hour. See pp. 160-162.

I recommend the purchase at this latter Hotel of a pamphlet in English entitled *The Mysterious Bridge on the abyss to be seen from the Tête Noire*, published at Martigny-Bourg by Bioley. The author set out from Martigny on a hot day in August to walk over the Forclaz to the Tête Noire. "The road," he says, "which winds itself through the forest" (on the Forclaz) "is perfectly well entertained, and wide enough to allow the circulation of carriages with two horses." This was how it appeared to him after he had taken (by his own admission) at least three drinks in the course of two hours, whilst walking up. At the top of the Forclaz "that which pleased me most," he says, "was the frank and hearty reception I found there. I took my seat at the table and dined with the best possible appetite." The effect of the dinner shortly became apparent. He found that "the road passes before . . . a saw-mill in full activity and successfully conducted. At present one can see there

hundreds of telegraphic posts prepared according to a new system, put in motion simply by the water." Upon arrival at the Hotel on the Tête Noire he encountered the host, "whose cordiality is well known. . . I will conduct you," said he, "to the mysterious bridge on the abyss of the Tête Noire, but, before we go, *it is prudent that you come to take some refreshments.* I accepted with thanks his invitation and we returned to the hotel. After lunch or wath is called in this country the dinner, he brought me a solid mountain staff and invited me to follow him, and not be afraid. I assured him that I was not timorous." This was after three drinks and a couple of dinners. For the remainder of the description refer to the pamphlet. It will lighten the way back to Chamonix.

After passing the Hotel on the Tête Noire, the road bends round to S.S.W., and for somewhat more than 2 kils. passes through forest, and principally upon a shelf cut out of the face of a cliff overhanging the Eau Noire. It then crosses to the left bank of the stream, and is shortly afterwards joined by the road from Salvan, and passes RESTAURANT DU FORT DE LA MADELEINE. One kil. beyond the bridge there is the Swiss Custom-house on the right; then a station for Gendarmes, and a few yards farther on the GRAND HOTEL SUISSE, **Châtelard.**[1] A hundred yards farther on the road crosses to the right bank. *At the bridge there is a stone marking the Franco-Swiss frontier.* About 500 feet on the French side, on the right, there is the HOTEL DE BARBERINE, which is a post of the French Gendarmerie; and, upon the opposite side of the valley, the village (3779 feet), and **Cascade of Barberine.** The village of **Vallorcine,** Café-Restaurant, is 2 kils. from Châtelard, and the Hotel du Buet about 2 kils. more. Thence to Chamonix, see page 107. The splendid view of the Aig. Verte is the most noticeable thing on the road between the Hotel du Buet and the Col des Montets. From no other direction can the relation of the Aig. du Dru to the Verte be seen so well. The entire round over the Col de Balme, returning by the Tête Noire, occupies about 9 hours.

	h.	min.
Chamonix to Argentière	1	20
Argentière to Col de Balme	2	15
Col de Balme to Hotel on Tête Noire . .	1	40
Tête Noire to Argentière	2	35
Argentière to Chamonix	1	15

Servoz; Écrevisse fishing; the Gorge of the Dioza (Diosa, Diosaz). When weather is unsuitable for the higher regions, go *écrevisse fishing* at Servoz, and visit the Gorge of the Dioza. **Servoz,** 2680 feet, pop. 519; HOTEL ET PENSION DE LA DIOSAZ; HOTEL DE LA FOUGÈRE (small), was formerly upon the road from Sallanches to Chamonix, which naturally followed the flattest and easiest ground, although this made the way circuitous. The village is very agreeably situated, rather more than half a mile to the N. of the new road (*the* road between Châtelard and les Montées), close to the entrance to the Valley of the Dioza, which runs along the back of the range of the Brévent.

[1] It is to be noted that although these several places are called Châtelard, the village of that name is more than a kilomètre away, on the road to Salvan.

Take an early train to les Houches, and thence go on foot towards Châtelard, and turn off anywhere on the left to the brook that you will see at the foot of the slope below the road. Here are **Écrevisses** (cray-fish). The manner of catching them is on this wise. Before starting, ask for some strips of raw meat from the kitchen (any rubbish will do), and bring these along with you in a basket. Cut several twigs 2 to 3 feet long, cleave them at one end, and in the clefts insert bits of meat. You then poke the ends of the twigs with meat attached into slimy places or under stones, and leave them at rest for a little. Examine your rods from time to time, to see whether there is an écrevisse hanging on to the meat. If so, land it, cautiously and cunningly, and begin again. On return to Chamonix give the écrevisses to the Chef of your hotel, who will know what to do with them. When this sport is over, cross the bridge at Châtelard to Servoz, which is only a few hundred yards from the Gorge. Admittance 1 franc. Beautiful beeches, and luxurious foliage at entrance. A plank path is carried on trestles or otherwise a long way up the chasm, which affords a succession of delightful prospects at its numerous bends, and has many cool, shady nooks, where one can repose and be lulled to sleep with the music of singing-birds and the murmuring of the stream. Notice the Inscription on the walls.

About a mile N. of Servoz, on the slopes overlooking the village, there is a marshy pool called Lac de la Côte, where the summit of Mont Blanc can be seen mirrored in the water—an exquisite spot for an artist. Return from Servoz by the old road, and over the Pont Pélissier. A few minutes after the bridge, this route joins the high-way just in front of the Hotel des Montées. This park-like road from Servoz to Pont Pelissier is well kept up, and leads through shady woods, well-adapted for readers.

	h.	min.
Chamonix to the near end of les Houches . .	1	
Les Houches to les Montées		45
Bridge of Châtelard to Servoz		30
Servoz to les Montées.		35
Les Montées to Chamonix	1	50

Another excursion which may be made upon days that are unfit for high levels is to **the Hotel-Pension Bellevue** or **Col de Voza (Cx. T. 70, 71, 72)**, over to the other side; descending *viâ* Bionnassay to Bionnay, and returning by St. Gervais and le Fayet.[1] Walk to les Houches (good beer at the little inn), and take the 'chemin direct,' which leads partly through fields and pastures, and partly through forests. Many flowers here. The **Hotel-Pension Bellevue** (1812 mètres, 5945 ft.) is now kept by Frédéric and Alphonse Payot, Guides of Chamonix. The view from it extends over the whole of the Valley of Chamonix, and in the contrary direction it is equally fine. Descending towards the W. by a steep path down the valley of **Bionnassay** one soon arrives at the

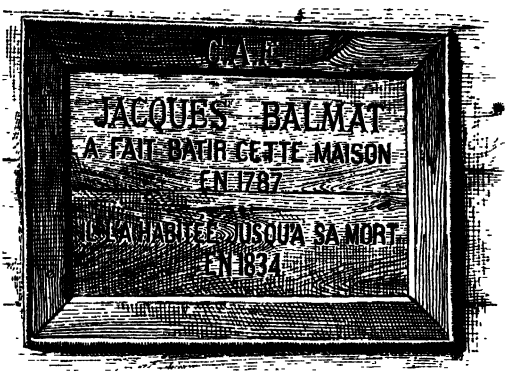
[1] Or, instead of descending to Bionnay from the Pavillon Bellevue or the Col de Voza, one may turn to the right to the **Inn** (good food and beds) on the edge of the pasture known as the **Prarion**. Thence by mule-path to the Village of St. Gervais takes about 1¼ hours.

village of that name, and joins the path coming from the Col de Voza, 5496 feet. A mile and a half away S.E. by E. there is the small *Glacier des Têtes Rousses* where the flood originated which descended tumultuously and wrecked the Baths of St. Gervais in 1892 (see p. 143). Few traces of this great disaster will be found in the valley of Bionnassay; but just below the village of **Bionnay** (3192 feet, no inn) it will be noticed that the road up the Val Montjoie is cut through a pile of boulders and sand about 20 feet high. This was brought down by the flood, and deposited there in a few minutes. At Bionnay turn to the right, for St. Gervais. After passing the hamlet les Praz, and just before entering the village, there is a road on the left leading downwards to the **Pont du Diable**, from which there is a fine view of the *upper* part of the **Gorge of Crepin.** Remount the road to **St. Gervais**; SPLENDID HOTEL AND DES ÉTRANGERS; HOTEL DU MONT BLANC; HOTEL DE MONT JOLI; HOTEL DE GENÈVE; besides several cafés and shops; Post and Telegraph. The village of St. Gervais occupies a pleasant position on slopes at the extreme western end of the Range of Mont Blanc, overlooking the plain of Sallanches. The *Baths* of St. Gervais are several hundred feet below, out of sight. Enquire at the village for the path to them. A little way down it, another path leads off on the left to a spot where the *middle* of the Gorge of Crepin (Torrent of Bon Nant) can be well seen. Admission 50 centimes. Returning to the original path, and continuing downwards through picturesque woods, in 10 or 12 min. you will arrive at the bottom of the Gorge. Turn to the left, pass between the Hotel buildings and cross a little bridge over the torrent to inspect the *lower* end of the Gorge; and then return along the road by the side of the torrent. About a kil. below the Hotels of the Baths there is the new **Bathing Establishment.** See Chap. xiv. Sulphur baths 2 francs, Vapour baths 6 francs. A few hundred feet farther on, the road joins the highway at le Fayet. Return to Chamonix either on foot or by diligence.

	h.	min.
Chamonix to near end of les Houches	1	
Les Houches to Pavillon Bellevue	2	
Pavillon Bellevue to Bionnay	1	5
Bionnay to St. Gervais village		40
St. Gervais village to le Fayet, *viâ* the Baths . .		35

The Cascade du Dard, the Glacier des Bossons, the Grotto, and the House of Jacques Balmat (Cx. T. 1, 2), can all be visited in an afternoon. Take the path to the Pierre Pointue (page 98); pass through the hamlets of les Praz Conduit, les Barats, and les Tsours (Tissours), which are all close together, and then through forest. In about 35 min. you will reach the HOTEL DU CASCADE DU DARD, a very humble place, close to the waterfall. Soon after passing the hotel, the path divides,—that on the left goes to the Pierre Pointue, and the other to the Glacier des Bossons. Cross the flat ice to the left bank, and visit **the Grotto**—a gallery excavated in the side of the glacier, for the benefit of tourists. There is a small charge for admission. From the Grotto descend by the path on the left bank of the glacier, which

at this part is broken up into fantastic pinnacles. Cross the stream issuing from the glacier, and make for les Pèlerins. The **house of Jacques Balmat**, an ordinary châlet with barn attached, is almost the highest one of the village, and stands apart from the rest. At present it is not inhabited. The inscription upon it was put up by the French Alpine Club. In returning, you can either walk

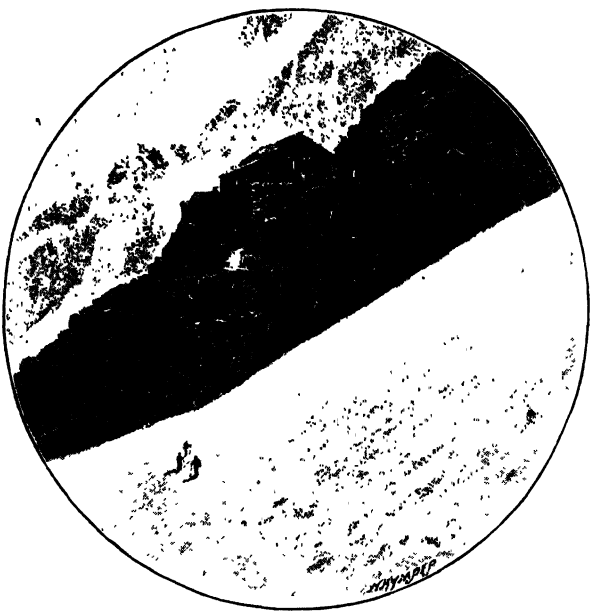


TABLET ON BALMAT'S HOUSE.

home through the fields, by les Favrants, les Barats, and le Praz Conduit (which will take about 25 min.), or cross the bridge of Perralotaz and go back by the high road. This is about 1 kil. longer than through the fields. At the **Village of les Bossons** (which commences at the bridge of Perrolataz) there are the workshops of **Messrs. Simond Frères, the ice-axe makers**; who have also a shop in Chamonix, against the Bureau de Tabac, in the Rue Nationale. This is the best place in Chamonix for ice-axes (piolets). Moderate prices.

To the Pierre Pointue, returning by the Plan des Aiguilles (Cx. T. 20, 22, 28). To the Pierre Pointue will occupy 2 hs. ascending, and 1 h. descending. Less than these times is quick. The path to it forms a portion of the usual route for the ascent of Mont Blanc. See pp. 98, 112. After passing the Hotel du Cascade du Dard, there is only one other place where refreshments can be obtained on the way, the **Châlet de la Para**, 5266 feet, prices fair, which is almost exactly half way up *in time*. The path emerges from the forest soon after leaving this place, and for most of the rest of the way it is shadowless. Take umbrellas. The **Pavillon at the Pierre Pointue**, 6723 feet, is a shabby-building, and is usually kept by the lessee of the Grands Mulets. Prices high. The Brévent is nearly immediately opposite, and the path to it *viâ* Bel Achat is very well seen. The view also embraces most of the Valley of Chamonix, and a consider-

able portion of the tumultuous part of the Glac. des Bossons. On leaving the Pavillon turn eastwards, and skirt the bases of the Aigs. du Midi, du Plan, and de Blaitière, by what is termed the **Plan des Aiguilles.** One can go all the way round to the Montanvert, or descend on Chamonix by more than one path. Guides unnecessary in fine weather,—the way is readily perceived. It is best to start for this excursion at a reasonably early hour.



THE GRANDS MULETS, IN 1895.

From the Pierre Pointue to the **Pavillon du Plan de l'Aiguille** takes about 1 hour. The wooden building, formerly called the Pavillon, was superseded in 1897 by a larger structure. This place can be reached more directly from Chamonix by a path which was finished in 1896. The way to the Pierre Pointue is followed as far as Tissours, and three minutes after entering the forest the new path turns off on the left. A sign-board is placed here, inscribed 'Chemin direct du Plan de l'Aiguille,' and close to it there is a châlet where drinks can be had. Time ascending about 2 h. 50 min.; descending 75 min.

To the Pierre Pointue, Pierre à l'Echelle, and the Grands Mulets (Cx. T. 21, 108; and 2, "courses extraord."). This excursion is a portion of the route taken for the ascent of Mont Blanc, and *can* be

united to the last one, but without this it will occupy a moderately long day; 4 a.m. is not too early to start. Average time from Chamonix to the Grands Mulets is about 5¼ to 5½ hs.; descending, about 3¼ hs. Anything less is quick time. For the way to the Pierre Pointue, see pages 113, 114. The mule-path comes to an end there, but thence to what is called the **Pierre à l'Echelle** there is a path over which any English boy ought to be able to go alone. After that, he had better have someone with him. The way from the Pierre Pointue to Pierre à l'Echelle gradually approaches the right bank of the Glac. des Bossons, and at the latter place arrives at the edge of the ice. There are not many ladders usually seen there now. It takes its name from the habit which was formerly indulged in, in imitation of De Saussure (see pp. 38-9), of carrying a ladder about to use for crossing crevasses. The ladder, or ladders, were usually left here. From this place the rocks called the Grands Mulets can be seen, and in clear weather anyone who is accustomed to traverse glacier will find a route to them; but in *bad* weather this passage, though scarcely a mile and a half long, is trying even to experts. There have been occasions when it has been *impossible* to the *élite* of the guides of Chamonix. See p. 55. For one-half of the distance there are no greater difficulties than such as arise from walking over ice which is fissured; but upon arrival at 'the junction' the point of union of the eastern Glac. de Taconnaz and the Glac. des Bossons the ice is a good deal dislocated (see Illustration on p. 42), under any circumstances will require the use of the axe, and at times requires something more. The excursion from Chamonix to the Grands Mulets ought not to be undertaken *without guides* except by persons who are accustomed to traverse glaciers under all conditions of weather.

After passing 'the junction,' the way becomes easier; but it is seldom possible to steer a *direct* course to the Grands Mulets. One is driven to the right (north-west), and then has to double back.

The Grands Mulets, 10,007 feet, as a resting place on the ascent of Mont Blanc, was discovered by the earliest explorers of the mountain. This island of rock is, doubtless, an Aiguille of the ridge which lower down is called the Montagne de la Côte. It occupies a very commanding position, and the views from it looking across the Valley of Chamonix, towards the Aig. du Midi, and, in the contrary direction, over the Glac. de Taconnaz to the Aig. du Goûter are all striking. A sunset seen from the Grands Mulets will be remembered. The building there termed the Pavillon—is, like the other one at the Pierre Pointue, the property of the Commune of Chamonix, and the two places are generally let together for a term of years. There are beds at the Grands Mulets, and food can be had. "The Commune reserves to itself the right to fix the price of lodging, etc.,"—the tenant has no option in this matter. The following are prices fixed by the Commune.

	fr. cts.
Logement d'un Voyageur aux Grands Mulets, service et bougie compris pour une nuit	12
Un déjeuner de Voyageur à la fourchette . . .	4

	frs.	cts.
Dîner sans vin	6	. .
Chaque repas de guide, vin compris	2	50
Provisions pour l'ascencion au Mont Blanc et autres sommités, menu habituel par tête, guide compris .	4	. .

Les mets ou provisions faisant l'objet du present tableau seront de bonne qualité et d'un volume raisonable autant qu'il sera possible de le faire à cette altitude.

The building shewn in the Illustration on p. 114 was superseded in 1897 by another one, higher up the rocks.

	h.	min.
Chamonix to the Pierre Pointue	2	
Pierre Pointue to Pierre à l'Echelle		50
Pierre à l'Echelle to Grands Mulets	2	25
Grands Mulets to Pierre à l'Echelle	1	35
Pierre à l'Echelle to Pierre Pointue		25
Pierre Pointue to Chamonix	1	

Ascent of the Montagne de la Côte (Cx. T. 101), returning by the Glacier des Bossons. This excursion *can* be combined with the last one, but it will add several hours to the day's work. It was *viâ* the Montagne de la Côte that most of the early attempts on Mont Blanc were made, and it was this way Balmat went on the first ascent, and De Saussure after him. See pp. 14, 15, 17, 19, 21, 23, 30, 31, 35, 41. It takes about 5 hs. from Chamonix to the top, and 3½ to 4 hs. coming back by 'the junction,' Pierre à l'Echelle, and Pierre Pointue. Go down the high road so far as the village of les Bossons, and follow the path leading to the Glac. des Bossons. This presently divides. Take that to the right, which leads into the vallon of the Taconnaz Glacier, and mounts an old moraine on its right bank. When the moraine terminates, the path at first ascends the slopes on the right bank (or eastern side of the Montagne de la Côte), and then gets near the *arête* of the ridge, and Chamonix can be seen. The way is an old one, and it occasionally dies out, though in other places it is a good path. It is presumably that which was followed by De Saussure.

At the very top of the Montagne there is a cairn, and alongside the rock on which this is erected there are the remains of a regularly built though unroofed hut. About 200 feet below, there are some very large boulders, which appear to have come from the Rochers Rouges. One of them measures 10 mètres high, by 9 by 14 mètres. From the summit one sees the Grands Mulets, and the way up Mont Blanc as far as the edge of the Grand Plateau. The Aig. du Midi and the Dôme du Goûter both look very fine from this position, and the view over the valley of Chamonix is as good as, or better than that from the Grands Mulets. See p. 65 for the death of M. Cauro on the Montagne de la Côte.

Amongst the minor excursions not already mentioned there is that to the **Cascade de Blaitière.** The falls can be seen from Chamonix, and a visit may be paid to them in an hour. Close to one of the largest there is the **Restaurant Cascade de Blaitière,** where refreshments can be obtained.



THE COL DE TALÈFRE.

CHAPTER XI.

EXCURSIONS FROM THE MONTANVERT.

TO THE JARDIN—BY THE COL DU GÉANT TO COURMAYEUR—THE *SÉRACS* OF THE GLACIER DU GÉANT—ASCENT OF THE AIGUILLE VERTE—AIGUILLE DU DRU—THE GRAND AND PETIT DRU—PIC SANS NOM—AIGUILLE DU MOINE—LES DROITES—LES COURTES—AIGUILLE AND COL DE TRIOLET—COL DE TALÈFRE—AIGUILLE DE TALÈFRE—COL DE PIERRE JOSEPH—COL DE LESCHAUX—COL DES HIRONDELLES—COL DES GRANDES JORASSES—MONT MALLET—PIC DU TACUL—AIGUILLE DU GÉANT—AIGUILLE DU MIDI—AIGUILLE DU PLAN—AIGUILLE DE BLAITIÈRE—AIGUILLES DES CHARMOZ—AIGUILLE DE GRÉPON—THE LITTLE CHARMOZ—AIGUILLE AND COL DES GRANDS MONTETS.

IN the middle of the season the Montanvert Hotel is sometimes full, and overflowing, and tourists cannot rely upon being taken in; but information as to the state of affairs can readily be obtained before starting from Chamonix, as there is telegraphic communication. The excursions from the Montanvert—for which it is properly the starting-point—embrace all those that can be made in the basins of the Mer de Glace, and its tributaries the Glaciers de Talèfre, du Géant, and de Leschaux. As these basins extend over nearly one-third of the total length of the Range of Mont Blanc, the excursions that can be made are numerous, and they include difficult as well as easy ones. Whilst *mentioning* the majority of those which can be made, I do not enter into detail respecting the more difficult ones, and refer those who may desire fuller information to the *Guide de la Chaine du Mont Blanc*

à l'usage des Ascensionnistes, par Louis Kurz, Neuchatel, 1892, which can be had of Mons. H. Kündig, Corraterie 11, Geneva, and elsewhere.

The most popular excursion from the Montanvert is to the **Jardin (Cx.•T. 23, 24)**, a rocky island in the middle of the basin of the Glac. de Talèfre. The upper end of it is 9833 feet above the sea, and about 700 feet above its lower extremity. It acquired this name earlier than the time of De Saussure, who says of the way to it from the Montanvert that at first it is easy enough, although high above the glacier, but 'in a quarter of a league' it is lost upon a steep slope.

"The first two times I passed that way, one could only get foothold on some little inequalities or cavities in the rock, and if one had slipped, would have tumbled on to the glacier, deep down below. But in 1778, as soon as I got to Chamonix, I sent off two men, who mined the rock while we went to the Buet, and made this place, if not very convenient, at least free from danger. Those who visit the bottom of the glacier after us, will be under obligations to us for having facilitated the way. There are two similar bits close together, called *les Ponts*. After having passed them, one descends to the bank of the glacier, and follows the *moraine* for some time. One passes there close to a spring . . . its water is admirably cool and clear." *Voyages*, § 628.

He then goes on to describe how he traversed the medial moraines of the Mer de Glace, and clambered up the rocks of **the Couvercle** to turn the tumultuous ice-fall of the Glac. de Talèfre, and arrived at the brink of the comparatively flat glacier which lies between the Couvercle and the Jardin, which is, he says,

"almost circular in shape, slightly raised above the level of the glacier. The middle of July is only the beginning of spring in these high regions, but at the end of August it is covered with a fine turf, and a large variety of pretty Alpine flowers. And so it is called **le Courtil**, a word which, in Savoyard as well as in old French, means **Jardin** (garden). It is enclosed like a garden, for the glacier has deposited around it a ridge of stones which form a fence."

These passages shew that in the time of De Saussure the route followed the exact one taken at present, and it is evident that the way had been known some length of time before 1778.

The Jardin is right in the heart of the ice-world, and is almost encircled by snowy peaks. The route to it is marked on the folding map. Only a mile away to the W. there is the Aig. du Moine (11,214 ft.), then, turning to the right, the Aig. Verte (13,540 ft.), les Droites (13,222 ft.), les Courtes (12,648 ft.), Aig. de Triolet (12,727 ft.), and the Aig. de Talèfre (12,287 ft.). Part of the Italian side of Mont Blanc is seen, and it will be noticed that it is much steeper than the French side. M. Venance Payot, in his *Végétation de la région des neiges ou Florule de la Vallée de la Mer de Glace*, Lyons, 1868, enumerates 109 species of plants which have been obtained on the Jardin. The excursion can be made in a short day. Return from the Jardin to the Montanvert is frequently made by the moraine on the left bank of the Glac. de Talèfre *viâ* **Pierre à Berenger**, where there is a *cabane* (untenanted) which is useful as a refuge in bad weather. This is a rather easier route than that by the Couvercle. Time going *viâ* Couvercle about 4¾ hours; returning by Pierre à Berenger 4¼ hours.

One of the finest excursions that can be made from the Montanvert is the passage of the **Col du Géant** to Courmayeur **(Cx. T. 14, courses**

ext.). Some persons go only to the summit of the Col and return the same way **(Cx. T. 15, courses ext.).** Either of these excursions requires an entire day. Or one can go from the Montanvert **to the foot of the Séracs of the Glacier du Géant (Cx. T. 25)** and back in an afternoon.

The Col du Géant is the oldest pass across the main chain of Mont Blanc, and it is one of the very few that are of the least practical utility. In the *Journal de Lausanne*, July 21, 1787, there is an article entitled *Extrait d'une lettre de Chamonix, du 8 Juillet*, 1787, in which it is said that Alexis Tournier and Jean Michel Cachat des Plans left Chamonix at 10 p.m. on June 26 to go to Courmayeur, *viâ* 'the plain of the Tacul', and got to their destination at 6 p.m. on the next day. On June 28, M. Exchaquet, Directeur Général des Fonderies du Haut Faucigny, also went the same way with two Chamonix guides, and made the passage in 17¾ hours. At that time the pass does not appear to have been called the Col du Géant [see p. 37], although it is pretty certain that it was known as a pass some length of time before. Its discovery can hardly have been made without a number of preliminary explorations, and failures. It is not an obvious pass when regarded from Courmayeur, and the summit cannot be seen either from Chamonix or from the Montanvert. It was crossed on Jan. 27, 1882, by the late Mr. C. D. Cunningham, with Léon Simond, Ambroise Bossonney, and Ed. Cupelin, in 12 hours, from the Mont Fréty to the Montanvert. This was said to have been the first winter passage.

Starting from the Montanvert, the way for the Col du Géant is the same as that for the Jardin for two-thirds of the distance to the Couvercle. It then approaches the base of the Tacul, and keeps near the right bank of the Glac. du Géant, as the ice there is entirely free from difficulty. Years ago, it was customary to make one's way from this point past the ice-fall of the Glac. du Géant either by the lower rocks of the Aig. Noire (see p. 37), or by the ice on that side (the right bank). But latterly it has been the habit of guides to conduct their Messieurs across the glacier to the left bank, and to find a passage through the *séracs* near the Petit Rognon. Both of these tracks are laid down on the folding map. This ice-fall is

"one of the grandest ice cascades in the Alps. At the summit it is broken into transverse chasms of enormous width and depth; the ridges between these break across again, and form those castellated masses to which the name of *séracs* has been applied. In descending the cascade the ice is crushed and riven; ruined towers, which have tumbled from the summit, cumber the slope, and smooth vertical precipices of ice rise in succession out of the ruins. At the base of the fall the broken masses are again squeezed together, but the confusion is still great, and the glacier is here tossed into billowy shapes." *Tyndall.*

When above the ice-fall, make for the left hand of the rocks called la Vierge, and thence steer a direct course to **the Col** (11,030 feet). The **Cabane** there is a few feet down on the southern side, and commands a magnificent view over Italy. The descent to Courmayeur is effected by the rocks immediately underneath the Cabane (over which there is a strong track) to the Mont Fréty Hotel, where a mule-path commences. For the Italian side of the Col, see Chap. xiv.

Under competent guidance, the passage of the Col du Géant is a simple matter, *in fine weather;* but it is not advisable to neglect the use of the rope on this pass (see p. 39), or for persons without stamina to go ill-clad (pp. 57-8); and upon the Courmayeur side, although there is no real difficulty, the slopes must be treated with respect (pp. 52, 60). On so ordinary an excursion as that to the ice-fall of the Glac. du Géant it is possible to incur danger by approaching too closely underneath the *séracs*. These ice-towers fall frequently.[1] The length of time which is taken in crossing the Col du Géant varies considerably. See pp. 37-9. Sometimes several hours are occupied in passing the ice-fall Under ordinary circumstances reckon 7 to 7½ hours from the Montanvert to the summit, and 5 to 6 hours returning the same way. Anything under 3 hrs. is good time in descending from the summit to Courmayeur. Start early.

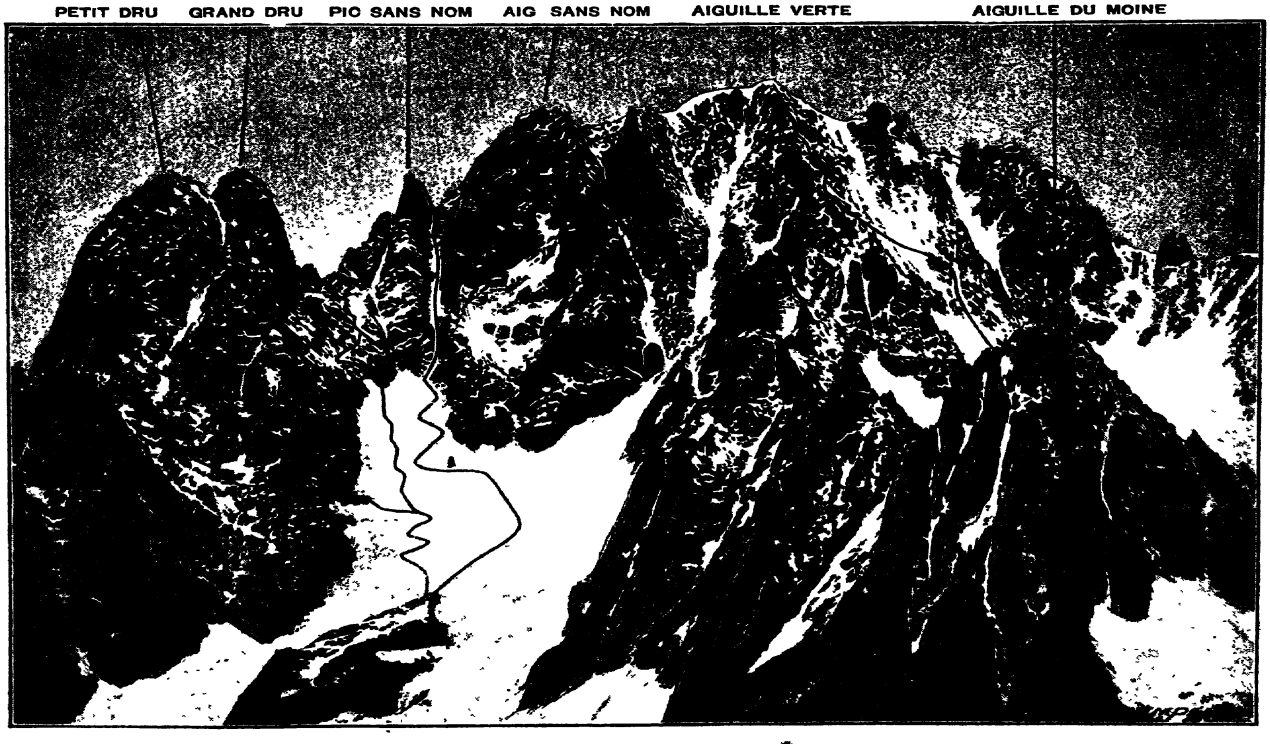
After the Jardin and the Col du Géant, the Ascents of the various Aiguilles immediately opposite have perhaps the greatest attractions for visitors at the Montanvert.

Ascent of the Aiguille Verte, 13,540 feet (Cx. T. 32, courses ext.). This Aiguille is the culminating point of the block of mountains between the Mer de Glace and the Glac. d'Argentière. Intelligence of the first ascent, made by myself on June 29, 1865, with Christian Almer of Grindelwald and Franz Biener of Zermatt was received at Chamonix with incredulity. (See *Scrambles amongst the Alps*, chap. xviii.)

The original route for the ascent of the Aig. Verte is the ordinary one for the Jardin so far as the Couvercle. Thence proceed directly towards the base of a large snow couloir that leads from the Glac. de Talèfre right up to the crest of the ridge connecting the summit of the Verte with the mountain called les Droites. The first ascent was made by a little snow couloir to the right (East) of the great one. At the top of the small couloir we crossed over to the large one, and ascended in it so long as there was *snow;* and when ice replaced snow turned to the rocks on the left (West), and completed the ascent by the ridge descending southwards (ridge of the Moine), by snow. The ascent from the Couvercle to the Summit occupied 7 hs. and the descent from the Summit *to Chamonix* occupied 9¼ hs., including halts. The track is laid down on the folding map, and the upper portion of it is also shewn upon the Illustration upon p. 121.

On July 5, 1865, Messrs. T. S. Kennedy, C. Hudson, and Hodgkinson, with the guides Michel Croz, M. A. Ducroz of Chamonix, and Peter Perrn of Zermatt, endeavoured to improve upon the original route, by avoiding the couloirs, and by ascending mainly by the rocks of the ridge of the Moine. They started from the Couvercle, and occupied 19¼ hours (halts included) in going to the summit and back to the Couvercle.

A number of attempts have been made since then to ascend the Verte by other routes. On July 31, 1876, Messrs. Cordier, Maund and Middlemore, with J. Jaun, J. Anderegg, and A. Maurer succeeded *viâ* the Glac. d'Argentière. In going from the châlets of Lognan to the summit 14 hours were occupied, and 6¾ (halts incl.) in descending to the Jardin. See *Alpine Journal*, vol. viii, pp. 289-296. On July 29, 1881, the late Mr. Mummery with Alex. Burgener ascended *viâ* the Glac. de la Charpoua, and thence by the large couloir which is seen in the Illustration on p. 121, leading downwards from, and slightly to the left of the summit; and at its upper part, where the couloir divides, bore to the left, completing the ascent by the *arête* of the ridge leading towards the West (ridge of the Dru). The descent was effected to the Couvercle.



THE AIGUILLE VERTE, PIC SANS NOM, AND AIGUILLE DU DRU.

Nearly 21 hours were occupied from the Montanvert to the summit and back to the Montanvert (halts incl.). See *My Climbs in the Alps and Caucasus*, by A. F. Mummery.

From the times that were occupied, it would not appear that there is any advantage in following these routes, and tourists are warned against them. That by the Charpoua Glacier "is open to the objection that almost at every step the texture of one's skull is likely to be tested by the impact of a falling stone." *Mummery.* Of the route by the Argentière Glac. it is said "that without the combination of good weather, good guides, and a good state of snow, it would be madness to attempt it." *Maund.*

On Aug. 21, 1902, the late Mr. R. W. Broadrick and Mr. A. E. Field, with Joseph-Louis Ravanel of les Iles and Joseph Demarchi of les Barats, started from the usual sleeping-place for the Aig. du Dru on the Charpoua Glacier at midnight, thence ascended the Aig. Sans Nom and followed the *arête* leading from its summit to that of the Aig. Verte. At 1.15 p.m. they commenced the descent of the Verte on the side of the Glac. de Talèfre, and reached the Montanvert at 12.5 a.m. on the next day. See *Alpine Journal*, vol. xxi, pp. 261-263.

Herr Hasler of Bern, with the guide Jossi, left Chamonix at mid-day on March 14, 1903, ascended the Aig. Verte by the usual route, and returned to Chamonix at midnight on March 15!

The original route must always be liable to some variation, and it is probable that exactly the same line is never taken on any two successive occasions.

The Aiguille du Dru is the most prominent of the Aiguilles seen from the Montanvert. It has two summits, of which the eastern one is the higher. Both can be seen from N. or S., but from the Montanvert Hotel the lower one is alone visible. The highest point, the true summit of the Dru, is now sometimes called 'the Grand Dru,' or 'pointe Est,' or 'sommet oriental.' The lower summit is termed 'the Petit Dru,' 'sommet occidental,' 'pointe Charlet.'

The first ascent of the **Aiguille du Dru**, 12,317 feet (**Cx. T. 49, courses ext.**), was made in 1878 by Messrs. Dent and Hartley, with Alex. Burgener and K. Maurer, who started on Sept. 11, passed two nights on the *rognon* of the Charpoua Glac., and returned to the Montanvert at 9 a.m. on the 13th. See *Above the Snow-line*, by C. T. Dent. The first ascent of **the lower peak (Cx. T. 48, courses ext.)** was made by three Chamoniards (Charlet, Folliguet, and Payot) on Aug. 29, 1879. According to Forbes, the difference in elevation of the two peaks is 67 feet, others have estimated it from 80 to 120 feet. The ascent of the Grand Dru has been made from the Montanvert within 14 hours, but it commonly extends over two days. The routes for the two peaks become distinct from each other soon after leaving the *rognon* of the Charpoua Glac. Both are given upon the Illustration on p. 121. It is possible to pass from the higher to the lower peak, or *vice versa*, and consequently to ascend by the one route and to descend by the other.

The **Pic Sans Nom** (not included in the Cx. T.) is a small Aiguille on the ridge of the Dru, to the E. of the Grand Dru. The route for this is the same as for the ascent of either Dru so far as the top of the Charpoua *rognon* (9324 feet), after that it becomes distinct. See track on Illustration on p. 121. The first ascent was made by Messrs. Carr, Morse, and Wicks, on July 28, 1890, who bivouacked on the lower part of the Charpoua *rognon*, occupied 11 hs. thence to the summit, and 8½ hs. from the summit to the Montanvert. The height of this Aiguille has not been determined. Mr. Wicks considers that it is 70 to 100 feet more than the Grand Dru. The summit can be seen from the Montanvert Hotel. See *Alpine Journal*, vol. xv, p. 338.

The name **Aiguille Sans Nom** has been absurdly used in late years to designate a cliff on the ridge of the Dru. See Illustrations upon pp. 106, 121. It was ascended on Aug. 16-18, 1898, by the Duke d'Abruzzi, with J. Petigax and L. Croux of Courmayeur, and A. Simond of Chamonix. See *Alpine Journal*, vol. xix, pp. 242-3.

The ascent of **the Aiguille du Moine,** 11,214 feet **(Cx. T. 46, courses ext.).** This Aiguille is situated at the southern end of the southern ridge of the Verte. Its ascent has been made from several directions, but the S. side (shewn on the right of the Illustration on p. 121) is generally preferred. Time from Montanvert and back about 9 hours.

Le Cardinal, 11,936 feet, is a name given on the Imfeld-Kurz Map of Mont Blanc to a two-pinnacled peak on the ridge connecting the Aig. du Moine with the Aig. Verte. The eastern pinnacle was ascended by Mr. W. E. Davidson with the guides Christian Klucker and Sepp Innerkofler on Aug. 18, 1897, from the Glac. de Talèfre,—first by mounting to the foot of the western pinnacle by the southern rocks of the peak, and then by passing around its northern side, overlooking the Charpoua Glacier. The climb was completed from the gap between the two pinnacles, and the latter part of the descent on to the Glac. de Talèfre was effected down a very steep snow couloir between the Aig. Verte and the Cardinal.

Les Droites, 13,222 feet, and **les Courtes,** 12,648 feet, after the Aig. Verte, the two highest points of the ridge separating the Glacs. of Talèfre and Argentière, have both been ascended, and might be made the subject of excursions if they were worth the trouble. They are not on the List.[1] The **Aiguille de Triolet,** 12,727 feet, and the **Col de Triolet (Cx. T. 14, 18, courses ext.)** may very well be let alone. The former is inferior as a point of view to others which can be gained more easily (such as the Aig. du Moine), and the Col is useless as a Pass. This is not the case with the

Col de Talèfre, about 11,600 feet, which is one of the few passes across the main range of Mont Blanc that can compete in time with the Col du Géant. Upon the first passage of this Col on July 3, 1865, we took 13 hs. from the Montanvert to Courmayeur, including halts, or less than 10 hs. going time. See *Scrambles amongst the Alps,* chap. xix. The track is laid down on the folding map.

On leaving the Couvercle, make for the N. end of the Jardin; and, after passing it, steer a direct course to a bent snow couloir situated at the head of the Glac. de Talèfre. See Illustration upon p. 117. Time on the first passage from the Montanvert to the summit of the pass was 4 h. 35 min., including halts. The descent upon the Italian side leads down steep but firm rocks, well broken up, in about 40 min. to the head of the Glac. de Triolet. Make your way to the *right* bank of the glacier, and upon getting into the Val Ferret cross the Doire torrent by the bridge at Gruetta. This excursion is upon the **Courmayeur Tarif des Courses,** but is not upon the Chamonix one.

Continuing the circuit of the basin of the Talèfre, we finally come to the **Aig. du Talèfre,** 12,287 feet, which has been ascended from the basin of the Leschaux (Léchaud) Glacier, by the Glac. de Pierre Joseph.

The head of the basin of the Leschaux Glacier is surrounded by mountains of high average elevation, the finest individual bits being the imposing wall of the Grandes Jorasses, which is one of the grandest things of its kind in the Alps, and the steep corner with the Glac. du Mont Mallet. Several passes lead out of this basin to the Italian

[1] The basin of the Glac. de Talèfre is considered good hunting-ground for *crystals,* and the slopes of les Courtes have at times yielded large quantities. Victor Tissay, a guide, told De Saussure in 1784 that he had collected 300 lbs. weight there in three hours!

side, but none of them are adapted to novices. Commencing at the eastern corner, there is the **Col de Pierre Joseph (Cx. T. 22, 23, courses ext.)**, which goes over the top of the Aig. de l'Eboulement, 11,836 feet, and descends upon the Glac. de Triolet. Of this pass, its discoverer, Mr. Heathcote, says, "I may perhaps be permitted to add . . . it is one that can never become popular." Next there is the **Col** [or **Brèche**] **de Leschaux**, 11,280 feet, between the Aigs. de l'Eboulement and Leschaux (at the foot of the latter), which also descends upon the Glac. de Triolet; then the **Col des Hirondelles**, 11,411 feet **(Cx. T. 42, courses ext.)**, between the Grandes and Petites Jorasses, descending upon the Frebouzie Glacier. This pass acquired its name from the following circumstance.

"As we began to climb the snow-slopes we observed at a little distance ahead certain mysterious objects arranged with curious symmetry in a circle upon the glacier. Some twenty black spots lay absolutely motionless before us; and as we approached we became aware of their nature, and not, as I will venture to add, without a certain feeling of sadness. In fact, we had before us a proof of the terrible power with which tempests sometimes rage in these upper regions. The twenty objects were corpses—not human corpses, which, indeed, would in some sense have been less surprising. . . The poor little bodies which lay before us were the mortal remains of swallows. How it came to pass that the little company had been struck down so suddenly as their position seemed to indicate gave matter for reflection. Ten minutes' flight with those strong wings would have brought them to the shelter of the Chamonix forests, or have taken them across the mountain wall to the congenial climate of Italy. Whether the birds had gathered together for warmth, or been stupefied so suddenly by the blasts as to be slain at once in a body, there they were, united in death, and looking, I confess, strangely pathetic in the midst of the snowy wilderness." Sir Leslie Stephen, in the *Alpine Journal*, vol. vi, p. 357.

A fourth pass, into this basin, the **Col des Grandes Jorasses**, between the Grandes Jorasses and Mont Mallet, was effected by Mr. Middlemore in 1874, and is the loftiest of all, but its elevation has not been determined.

The peaks in the block of mountains between the basins of the Glacs. de Leschaux and du Géant have all been ascended. **Mont Mallet**,[1] 13,084 feet, and the **Pic du Tacul**, 11,280 feet **(Cx. T. 47, courses ext.)**, are excursions from the Montanvert; but the **Aiguille du Géant**, 13,156 feet **(Cx. T. 45, courses ext.)**, which is the most appetizing of the group, is best taken from Courmayeur. See pp. 154-5.

The principal excursions in the basin of the Glac. du Géant (beyond

[1] This peak is situated at the head of the Glac. du Mont Mallet, E.N.E. of the Aig. du Géant, and distant from it about one kilomètre. It was first ascended by Messrs. Leslie Stephen, Wallroth, and Loppé, with the guides Melchior Anderegg, Alex. Tournier, and ? Cachat, on Sept. 4, 1871. The ascent was made by the Glac. du Mont Mallet, and, near the summit, by rocks. "The ridge on which we stood was interrupted by a huge rock 'literally overhanging,' viciously smooth, and about fifteen feet in height. Melchior paid it the unusual respect of taking off his coat. Then he somehow fastened himself to the opposing rock, and, helped by a shove from Cachat's axe, executed a singular caper in mid-air, which placed him in the right line of ascent; and finally by a dexterous wriggle, reached the summit. . . The point of view is one of singular merit, as giving perhaps the most complete panorama of all the mighty ice-streams which combine to form the Mer de Glace." Sir Leslie Stephen in the *Alpine Journal*, vol. v, p. 303. This excursion is not mentioned in the *Tarif des Courses*.

the visit to the ice-fall, and the Col) are the ascents of the **Aiguille du Midi**, 12,608 feet **(Cx. T. 86, courses ext.)**, and the **Aiguille du Plan.** For the former see p. 46. The ascent has become a common excursion, and presents little difficulty, though from the side of the Grands Mulets the Aiguille appears quite inaccessible. The ascent of the Aig. du Plan can be made in a day of moderate length.[1]

The Aiguilles in the vicinity of the Montanvert are not, for the most part, suitable for beginners in mountaineering. The **Blaitière,** 11,591 feet **(Cx. T. 43, courses ext.)**, was ascended in 1874; the **Charmoz,** 11,293 feet **(Cx. T. 44, courses ext.)**, in 1880; and the **Grépon** a little later. Amongst minor excursions which are frequently made from the Montanvert may be mentioned the ascent of **the little Charmoz,** which will occupy about 3 hs. going up and 2 hs. coming down; and the **Aiguille des Grands Montets,** 10,850 feet, a small peak (not marked on my map) to the E. of the Aig. du Bochard, which can be got at *viâ* the Glac. du Nant Blanc, or from the Glac. de Lognan, or from that of Argentière. The ascent of this Aiguille can be combined with the passage of the **Col des Grands Montets (Cx. T. 28, 29, 30, courses ext.)** from the Montanvert to Lognan, returning by a path *viâ* the Ch. de la Pendant and the Chapeau. The round can be made comfortably in a short day.

[1] The Aig. du Plan was first ascended in July, 1871, by Mr. James Eccles with the guides Michel and Alphonse Payot, who bivouacked "on the Glac. du Géant near the Petit Rognon, and next morning started about 3 a.m. We kept as much as possible along the spur of which the Petit Rognon is the extremity, and, after passing the second ice-fall of the lateral glacier which descends from the Aig. du Plan, arrived at a moderately steep snow-slope which led to a curiously curved snow *arête*, at the further end of which appeared our Aiguille. On arriving at its base, we passed over to the Chamonix side, and after five or ten minutes' easy climbing arrived at the summit a little after 6 a.m."



SIR LESLIE STEPHEN.

CHAPTER XII.

EXCURSIONS FROM LOGNAN.

CHAMONIX TO LOGNAN—GLACIER D'ARGENTIÈRE—COL DOLENT—COL D'ARGENTIÈRE—ASCENT OF LA TOUR NOIRE—COL DE LA TOUR NOIRE—COL DU CHARDONNET—FENÊTRE DE SALEINOZ—COL DU TOUR—FENÊTRE DU TOUR—AIGUILLE DU TOUR—ASCENT OF THE AIGUILLE D'ARGENTIÈRE—AIGUILLE DU CHARDONNET.

THE excursions from Lognan embrace those which can be made within or leading out of the basin of the Glacier d'Argentière. This glacier, it will be seen from the Map, is one of the most considerable in the Range. The large area that it covers will not be suspected by those who view it from the Village of Argentière, or indeed from Lognan: as from those places only a portion of its lower course is seen.

To get to Lognan from Chamonix, go to Chauzalet, 3829 feet (see p. 107), and turn to the right, through the little group of châlets. The path soon takes to the lateral moraine on the left bank of the Argentière Glacier, and continues near the ice for the best part of an hour. It then bears to the right (south), and afterwards resumes nearly its original direction, and mounts directly towards the Hotel, which can be seen a considerable distance away. Time from Chauzalet 2 hs. 10 min.[1] One can also get to Lognan from the Village of Argentière **(Cx. T. 93-96)**, or go there across country from the Montanvert, *viâ* the Chapeau and the Châlets of la Pendant, by a path all the way. Time from Chapeau about 2 hs. The HOTEL, 6696 ft., Vallot, has replaced the old châlets which were formerly used on excursions in this basin.

The Glacier d'Argentière is nearly 7 miles long. Its lower 2 miles descend over a steep bed, and the ice there is so fissured as to be practically impassable. The uppermost 4 miles, however, are unusually flat, and afford an agreeable promenade, which may be taken at any hour of the day, amid scenery of the grandest character. The intermediate mile rises rather steeply, but any one can traverse it, and get to the upper plateau, *if led by a competent guide*. The *path* extends some distance above Lognan, and after its termination the route follows the left bank of the glacier. The whole of the upper basin comes into view when opposite to the Aig. du Chardonnet, and thence it is plain sailing up to the foot of the cliffs at the farthest extremity. *A rope should be used*, though for the most part the crevasses are visible and narrow.

The bottom of this large plateau (which is considerably more extensive than the Grand Plateau on Mont Blanc) is flat and smooth enough for a cyclist; but the slopes on each side rise steeply, par-

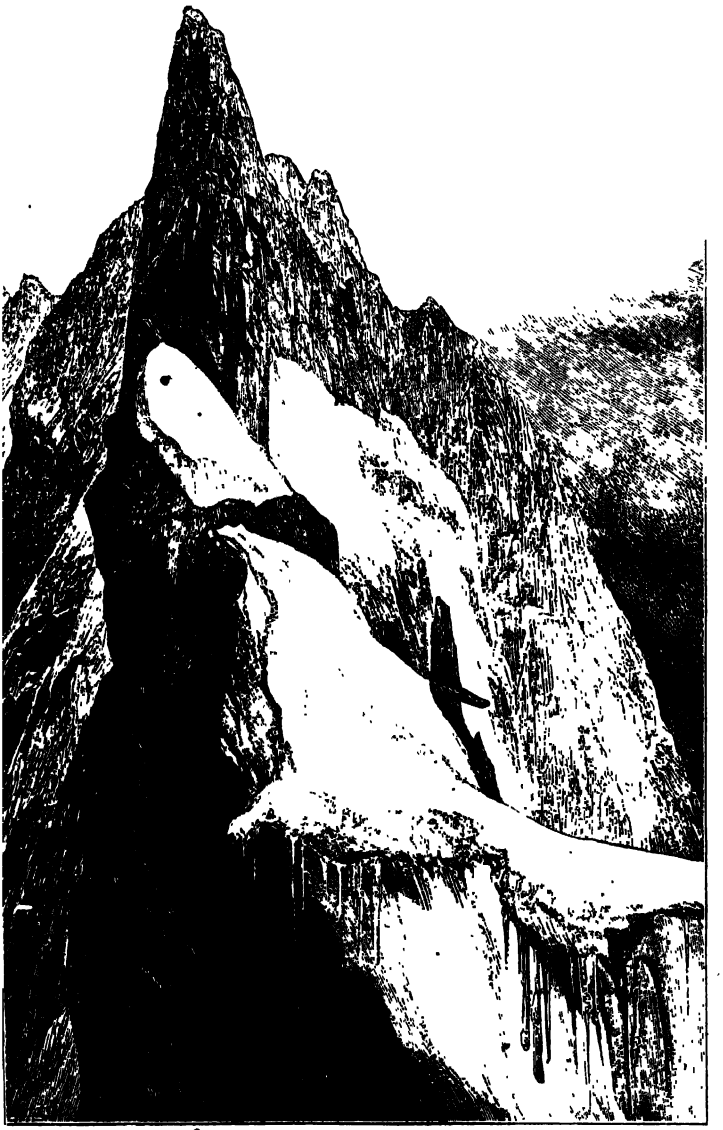
[1] This path has been accidentally omitted on the folding Map.

ticularly those of the Verte, les Droites and les Courtes, and are encrusted with glaciers that send many an avalanche thundering down. Keep at least several hundred feet away from the debris which will be seen at the foot of these slopes. (See page 60 for the fate of the Abbé Chiffiet.) At the extreme head of the Glac. d'Argentière, the cliffs extending from the Aig. de Triolet to Mont Dolent are too precipitous to permit the lodgment of snow in any quantity; but there is one large gully which will attract attention by its size and from its leading up to the lowest point on the ridge, that, apparently, is filled with snow. This is the **Col Dolent.** Its summit is on the frontier, and on the other side there is the Glac. du Mont Dolent (or Pré de Bar). In making a passage through this gap on June 26, 1865, we[1] were animated by a hope that we might find a pass which would compete with the Col du Géant; but, although we went through from Courmayeur to Chamonix in a day, at the end of the day we felt there was not much likelihood of the Col Dolent superseding the Col du Géant. Setting out from Courmayeur at 20 min. to 1 in the morning, at 4.30 a.m. we passed the châlets of Pré de Bar, and at a quarter past 8 were at the head of the glacier of the same name, and at the foot of the Col.

"It was the beau-ideal of a pass. There was a gap in the mountains, with a big peak on each side (Mont Dolent and the Aiguille de Triolet). A narrow thread of snow led up to the lowest point between them, and the blue sky beyond said, Directly you arrive here you will begin to go down. We addressed ourselves to our task, and at 10.15 a.m. arrived at the top of the pass. Had things gone as they ought, within six hours more we should have been at Chamonix. Upon the other side we knew that there was a couloir in correspondence with that up which we had just come. If it had been filled with snow all would have been well. It turned out to be filled with ice. Croz, who led, passed over to the other side, and reported that we should get down somehow; but I knew from the sound of his axe how the somehow would be.

"Croz was tied up with our good Manilla rope, and the whole 200 feet were paid out gradually by Almer and Biener before he ceased working. After two hours' incessant toil, he was able to anchor himself to the rock on his right. He then untied himself, the rope was drawn in, Biener was attached to the end and went down to join his comrade. There was then room enough for me to stand by the side of Almer, and I got my first view of the other side. For the first time in my life I looked down a slope more than a thousand feet long, set at an angle of about 50°, which was a sheet of ice from top to bottom. It was unbroken by rock or crag, and anything thrown down it sped away unarrested until the level of the Glacier d'Argentière was reached. . . I descended the icy staircase and joined the others, and then we three drew in the rope tenderly as Almer came down. The process was repeated; Croz again going to the front, and availing himself very skilfully of the rocks which projected from the cliff on our right. Our 200 feet of rope again came to an end, and we again descended one by one. From this point we were able to clamber down by the rocks alone for about 300 feet. They then became sheer cliff, and we stopped for dinner, about 2.30 p.m., at the last place upon which we could sit. Four hours' incessant work had brought us rather more than half-way down the gully. We were now approaching, although we were still high above, the schrunds at its base, and the guides made out, in some way unknown to me, that Nature had perversely placed the only snow-bridge across the topmost one towards the centre of the gully. It was decided to cut diagonally across the gully to the point where the snow-bridge was supposed to be.

[1] Michel Croz of Chamonix, Christian Almer of Grindelwald, Franz Biener of Zermatt, and myself.



THE SUMMIT OF THE COL DOLENT.

Almer and Biener undertook the work, leaving Croz and myself firmly planted on the rocks to pay out the rope to them as they advanced.

"Almer and Biener got to the end of their tether; the rope no longer assured their safety, and they stopped work as we advanced and coiled it up. Shortly afterwards they struck a streak of snow that proved to be just above the bridge of which they were in search. The slope steepened, and for thirty feet or so we descended face to the wall, making steps by kicking with the toes, and thrusting the arms well into the holes above, just as if they had been rounds in a ladder. At this time we were crossing the uppermost of the schrunds. Needless to say that the snow was of an admirable quality; this performance would otherwise have been impossible. It was soon over, and we then found



CHRISTIAN ALMER.[1]

ourselves upon a huge rhomboidal mass of ice, and still separated from the Argentière Glacier by a gigantic crevasse. The only bridge over this lower schrund was at its eastern end, and we were obliged to double back to get to it. Cutting continued for half-an-hour after it was passed, and it was 5.35 p.m. before the axes stopped work, and we could at last turn back and look comfortably at the formidable slope upon which seven hours had been spent.[2] When we arrived upon the Glacier d'Argentière, our work was as good as over. We drove a straight track to the châlets of Lognan, and thence the way led over familiar ground. Soon after dusk we got upon the high road at les Tines, and at 10 p.m. arrived at Chamonix." *Scrambles amongst the Alps*, chap. xvii.

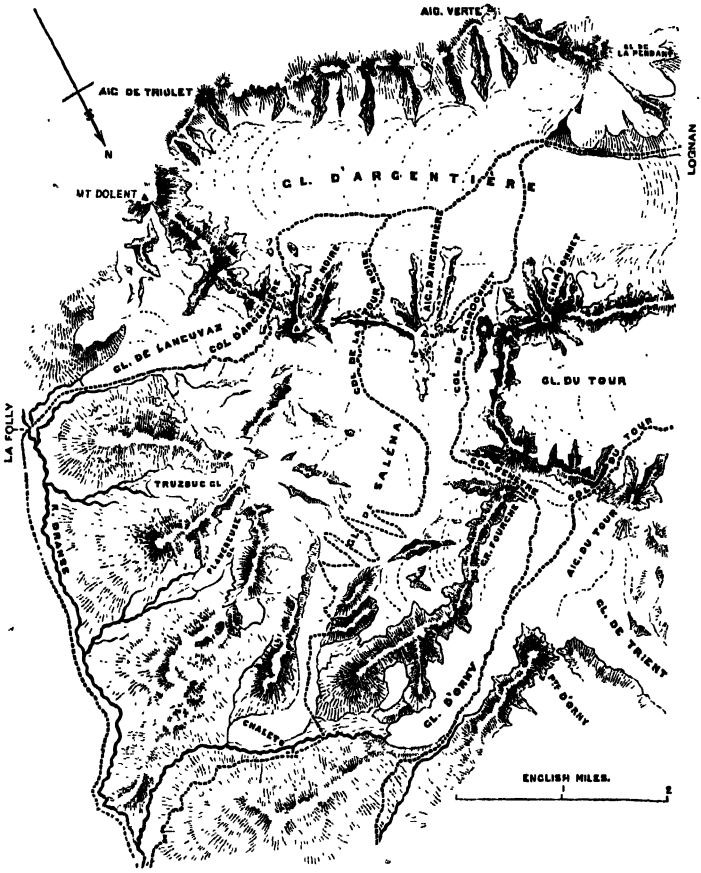
This pass has subsequently been traversed thrice in the contrary direction, starting from Lognan; but, notwithstanding the attractions that it has for the Alpinist, no one, I believe, has again crossed it from Courmayeur to Chamonix. There are few places in the Range

[1] By permission, from a photograph by Mr. E. Edwards. Christian Almer died at Grindelwald, May 17, 1898, aged 72.

[2] I estimate the height of this slope at 1200 feet. The triangulation of Capt. Mieulet makes the height of the pass 11,624 feet above the sea.

of Mont Blanc that offer better opportunities for the use of the ice-axe.[1]

On the N.E. side of the Glacier d'Argentière, the slopes between Mont Dolent and the Aig. du Chardonnet are less steep, but not less



beautiful than the greater ones of the Verte and les Droites. Three passes lead across them.

The **Col d'Argentière**, 11,549 feet **(Cx. T. 19, courses ext.)**, was discovered by Auguste Simond of les Tines while searching for crystals,

[1] The severity of the labour on this occasion caused Almer's right arm to swell in a rather alarming manner on the following day; but this did not prevent him from doing the greater part of the work upon the first ascent of the Aiguille Verte, three days later.

and was first crossed, on June 22, 1861, by him and his son along with Mr. Stephen Winkworth and Tobie Simond. They took 7 hs. from Lognan to the top of the pass, and 12 hs. more in descending *viâ* the Glac. de Laneuvaz to la Folly in the Val Ferret, and thence to Orsières.[1] The summit of the Col is on the south-east side of **la Tour Noire**, 12,608 feet, a little peak that can be climbed (by rocks) in 1½ hs. from the pass. This ascent was first made on Aug. 3, 1876, by the late Mons. E. Javelle and Mr. F. Turner.

In July, 1862, the late Mr. R. J. S. Macdonald and the Rev. Hereford B. George, with Melchior Anderegg and Christian Almer, proposed to cross the Col d'Argentière; but through taking the W. instead of the E. side of the Tour Noire they invented the **Col de la Tour Noire** (height about the same as the Col d'Argentière) and descended on to the Glac. de Saleinoz (Saleinaz, Salena) instead of the Glac. de Laneuvaz, where there passed a night in a hollow of the ice (at the point marked with a cross upon the accompanying Plan), and arrived at Orsières at 9 on the following morning, having occupied 31 hours in getting to that dirty place from Argentière![2] This pass has not, I believe, been again crossed from Argentière to Orsières. Like the Col Dolent, it is not included in the Cx. T. des courses.

The third pass, the **Col du Chardonnet**, 10,978 feet **(Cx. T. 14, 16, courses ext.)**, is the lowest depression between the Aigs. d'Argentière and du Chardonnet. In 1861, Mr. Winkworth remarked, "Between the Chardonnet and the Argentière is a tributary glacier, steep and crevassed, but I thought not impracticable, and leading—who knows where? Simond thought to the Glac. du Tour." It actually leads to the Glacier de Saleinoz. The maps of Mont Blanc at that time were much at fault at this end of the Range. The Col was first crossed on Aug. 24, 1863, by Mr. A. Adams-Reilly (for the Survey which was necessary to produce his Map) along with Mr. S. Brandram, the eminent 'reader.' After descending to the upper part of the Saleinoz Glacier, Reilly went through the Fenêtre de Saleinoz (marked on the Plan upon p. 130 Col Fenêtre), then descended the Glac. d'Orny by the way usually taken when crossing the Col du Tour, and arrived at Orsières in 15¼ hs., halts included. Ex. halts, about 11¼ hs. is average time.

Of late years, an excursion has been established from Lognan over the **Col du Chardonnet**, the **Fenêtre de Saleinoz**, 10,856 feet, and the **Col du Tour**, 10,991 feet, descending upon the Village of le Tour, 4695 feet, and returning thence to Chamonix **(Cx. T. 17, courses ext.)** The round is done in one day. The track is marked on the folding map. [A variation can be made on this by going through the **Fenêtre du Tour** (after crossing the Col du Chardonnet), which takes less time,

[1] The excursion is described by Mr. Winkworth in the second series of *Peaks, Passes and Glaciers*, vol. i, pp. 231-48. The height of the pass is stated there to be 12,550 feet, and its summit is laid down upon the map accompanying the paper in a position that it does not occupy.

[2] This adventure is related by the Rev. H. B. George in a very interesting paper in the *Alpine Journal*, vol. i, pp. 274-88. The Col was named after la Tour Noire, and that name appears to have been given to the peak because it is a tower or pinnacle of dark rock. Upon the Mieulet and the Siegfried Maps the Peak is called le Tour Noir! and M. Kurz, in his *Guide à l'usage des ascensionnistes*, calls the Pass Col du Tour Noir! On the folding map I follow the Official spelling.

and spares the trouble of descending from the Fenêtre de Saleinoz on to the Glac. du Trient, and remounting to the Col du Tour.]

	h.	min.
Lognan to the summit of Col du Chardonnet . .	4	45
Col du Chardonnet to top of Fenêtre de Saleinoz .	2	15
Fenêtre de Saleinoz to Village of Argentière . .	4	45

A pass was effected by Mr. G. B. Tunstall-Moore, with the guides Alphonse Simond and Edouard Payot, on July 26, 1900, from the basin of the Glac. d'Argentière to that of the Glac. de Talèfre, between les Courtes and the Aig. de Triolet. No name seemed to have been bestowed upon this pass. From Lognan to the Montanvert occupied 16½ hs.

The principal **Ascents** to be made from Lognan are those of the Aig. d'Argentière and the Aig. du Chardonnet. The **Aiguille du Tour,** 11,585 feet **(Cx. T. 37, courses ext.),** is an insignificant peak, which can be gained in a little more than an hour from the Col du Tour, by mounting on the side of the Glac. du Trient.

The **Aiguille d'Argentière,** 12,799 feet **(Cx. T. 34, courses ext.)**. is the highest point at this end of the Chain, and commands everything at the northern end of the Range; and it was this fact that led to the first ascent by Mr. Reilly in 1864. We made more than one attempt before the summit was gained. Reilly had a notion that the ascent could be accomplished by following the ridge leading to the summit from the Col du Chardonnet. This route was found unprofitable and we[1] then descended some distance from the Col towards the Argentière glacier, and re-ascended by a small lateral glacier and a couloir above it, directly towards the summit.

"The glacier was steep, and the snow gully rising out of it was steeper. Seven hundred steps were cut. Then the couloir became *too* steep. We took to the rocks on its left, and at last gained the ridge, at a point about 1500 feet above the Col. We faced about to the right, and went along the ridge; keeping on some snow a little below its crest, on the Saleinoz side. Then we got the wind again; but no one thought of turning, as we were within 250 feet of the summit.

"The axes of Croz and Couttet went to work once more, for the slope was about as steep as snow could be. Its surface was covered with a loose, granular crust; dry and utterly incoherent; which slipped away in streaks directly it was meddled with. The men had to cut through this into the old beds underneath, and to pause incessantly to rake away the powdery stuff, which poured down in hissing streams over a hard substratum. Ugh! how cold it was! How the wind blew! Couttet's hat was torn from its fastenings, and went on a tour in Switzerland. The flour-like snow, swept off the ridge above, was tossed spirally upwards, eddying in *tourmentes;* then, dropt in lulls, or caught by other gusts, was flung far and wide to feed the Saleinoz. 'My feet are getting suspiciously numbed,' cried Reilly: 'how about frost-bite?' 'Kick hard, sir,' shouted the men; 'it's the only way.' *Their* fingers were kept alive by their work; but it was cold for the feet, and they kicked and hewed simultaneously. I followed their example too violently, and made a hole clean through my footing. A clatter followed as if crockery had been thrown down a well.

"I went down a step or two, and discovered in a second that all were standing over a cavern (not a crevasse, speaking properly) that was bridged

[1] Reilly and I, Michel Croz and François Couttet (the founder of the Grand Hotel Couttet at Chamonix, and father of its present proprietor).

over by a thin vault of ice, from which great icicles hung in groves. Almost in the same minute Reilly pushed one of his hands right through the roof, The whole party might have tumbled through at any moment. 'Go ahead, Croz, we are over a chasm!' 'We know it,' he answered, 'and we can't find a firm place.' In the blandest manner, my comrade inquired if to persevere would not be to do that which is called 'tempting Providence.' My reply being in the affirmative, he further observed, 'Suppose we go down?' 'Very willingly.' 'Ask the guides.' They had not the least objection; so we went down, and slept that night at the Montanvert.

"We set out on the 14th of July, with Croz, Payot,[1] and Charlet, to finish off the work which had been cut short so abruptly, and slept, as before, at the Châlets de Lognan. On the 15th, about mid-day, we arrived upon the summit of the aiguille, and found that we had actually been within one hundred feet of it when we turned back upon the first attempt. It was a triumph to Reilly. In this neighbourhood he had performed the feat (in 1863) of joining together 'two mountains, each about 13,000 feet high, standing on the map about a mile and a half apart.' Long before we made the ascent he had procured evidence which could not be impugned, that the Pointe des Plines, a fictitious summit which had figured on other maps as a distinct mountain, could be no other than the Aiguille d'Argentière, and he had accordingly obliterated it from the preliminary draft of his map. We saw that it was right to do so. The Pointe des Plines did not exist."[2] *Scrambles amongst the Alps*, chap. xi.

The Swiss Surveyors seem to have an affection for the name 'Pointe des Plines,' and have bestowed it (in the Siegfried map) upon a previously unnamed point, 10,056 feet, on the northern side of the Glac. de Saleinoz. It is enough to make Reilly rise from his grave.

The Aig. d'Argentière can also be ascended from Lognan by way of the Glac. des Améthystes, and a ridge running from the summit towards the S.W. An ascent from Lognan to the top by this way has been effected in 8½ hs. (including halt). See *Alpine Journal*, vol. xx, p. 45.

The **Aiguille du Chardonnet**, 12.543 feet **(Cx. T. 35, courses ext.)**, occupies a commanding position, and from its summit there is a view only slightly inferior to that from the Aig. d'Argentière. It was first ascended on Sept. 20, 1865, by Mr. Robert Fowler, with the guides Michel Balmat and Michel Ducroz of Chamonix. They started from the Village of Argentière, followed the path up the right bank of the Glac. d'Argentière until near the mountain, and then turning eastwards struck the ridge high up which runs from the summit of the Chardonnet towards the north-west, and followed it to the top. Nearly 18 hours were occupied from the Village of Argentière to the summit and back. Mr. P. W. Thomas in Aug., 1879, improved upon this. He went from the Village of Argentière up the Glac. du Tour directly towards the mountain (not by the Col du Tour route), climbed its northern side (at the last part of the way following the same ridge as Mr. Fowler), and took only 8½ hs. getting to the summit and 3½ hs. coming back. This appears to be the best route that has been discovered up the Chardonnet.

[1] The Michel Payot who is referred to in the Introduction and elsewhere.

[2] Left Lognan at 3.15 a.m.; arrived on summit 11.30 a.m., and at the Village of Argentière 7.10 p.m. Time 12 h. 35 min. actual walking. The route taken on the first ascent remains *the* route. It is questionable whether anything is gained in time by descending to Argentière instead of *viâ* Lognan.

CHAPTER XIII.

THE ASCENT OF MONT BLANC.

ROUTES—BY THE BOSSES—BY THE CORRIDOR—TIMES ASCENDING AND DESCENDING—ST. GERVAIS ROUTE—COST—REFUGES—THE SUMMIT RIDGE—CREVASSES NEAR THE SUMMIT—VIEW FROM THE SUMMIT—THE SHADOW OF MONT BLANC—THE EIFFEL GALLERY.

MOST of the Excursions which are upon the Chamonix list have now been mentioned,[1] but there still remains the Ascent of Mont Blanc itself. There are three routes which are more or less used on the French side,[2] viz. :—

1. **From Chamonix by the Grands Mulets, Grand Plateau, and Bosses du Dromadaire.**
2. **From Chamonix by the Grands Mulets, Grand Plateau, Corridor and Rochers Rouges.**
3. **From Chamonix (or St. Gervais), by the Aiguille and Dôme du Goûter.**

and there are five others starting on the Italian side, viz. : —

4. **From Courmayeur, by the Glac. de Miage, Glac. du Dôme, and Dôme du Goûter.**
5. do. **by the Glacier du Mont Blanc.**
6. do. **by the Glacier de la Brenva.**
7. do. **by the Col du Géant and Aiguille du Midi.**
8. do. **by the Glaciers de Brouillard and de Fresnay, and the Mont Blanc de Courmayeur.**

These five latter (Nos. 4-8) will be referred to in Chapter XIV.

Route No. 1 is now the favourite way, and the number of the persons who go by it or by No. 2 exceeds that of those who use all the other ways put together. These two Routes are marked in strong dotted line upon the folding Map.

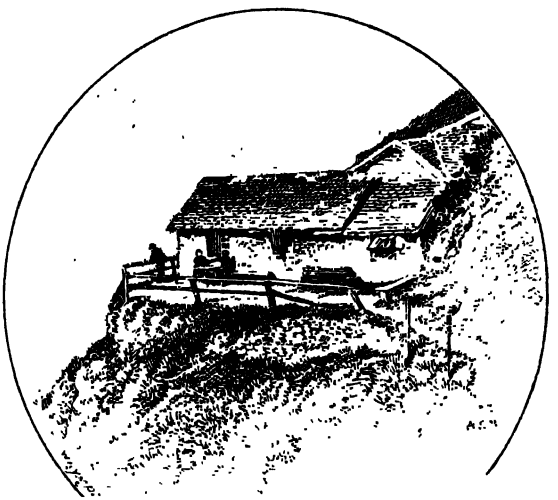
So far as the Grands Mulets see pp. 114-115.[3] Upon starting upwards from the Pavillon, it is customary to go to the upper end of the rocks upon which the establishment is situated (strong track) and there take to the Glac. de Taconnaz, and to traverse that glacier from one side to the other. See track on engraving of Mont Blanc from the Brévent. At this part the route mounts gently, and goes towards the ridge connecting the Aig. and Dôme du Goûter. It then turns to the left, and mounts directly towards the summit. Between the asterisk on the engraving and the Grand Plateau, one passes

[1] Several amongst the residue (the passage of the Col de la Brenva, and the Ascents of the Aig. du Géant and the Grandes Jorasses) will be dealt with in connection with Courmayeur.

[2] The old route from the Grand Plateau to the Rochers Rouges (*ancien passage*) is now abandoned.

[3] On the slopes of the Aig. du Midi, above Pierre à l'Echelle and its vicinity, there are many stones which are insecurely poised, and liable to come down at any moment. A Chamonix guide will not fail to point this out. A good look-out should be kept.

successively the *Petites Montées*, the *Petit Plateau* (see p. 61), and the *Grandes Montées*. The Grand Plateau is the next stage on the ascent. In the engraving, only the edge of it is seen. Five minutes after arriving there, if it is intended to follow **the route of the Bosses**, you turn to the right, and mount by moderately-inclined slopes to the right hand of the rock on which the Vallot Refuge is built, and get close to the summit of the Dôme du Goûter, 14,210 feet. Then turn to the left and keep to the crest of the ridge (or



THE PIERRE POINTUE.

near to it) all the rest of the way to the summit. The only steep bits upon this route are upon the Bosses du Dromadaire.

In 1899, a variation was made upon this route. After passing the Refuge Vallot, at a point about half-way between it and the lower of the Bosses, a direct course was shaped for the Summit, across the slopes. It seems not unlikely that this variation will be frequently adopted.

If **the Corridor route** is to be followed, go half across the Grand Plateau towards the summit, then bear to the left, and look for a way over the large crevasse or crevasses which will be found there. The track now becomes visible again on the view from the Brévent, mounting underneath the lower Rochers Rouges, going nearly east, and away from the summit. It then bends round to the right, and emerges a little lower than the Janssen cabane on *the* Rochers Rouges, 14,794 feet. You pass to the left of this, and shape your course for the rocks called the Petits Rochers Rouges, 15,030 feet, from them make for the Petits Mulets, 15,391 feet, and steer directly for the Observatory, 15,781 feet, which is in full view during the latter part

of the way. The Corridor is steep, but by this route the slopes are at a moderate inclination during the last 900 feet of the ascent.

The two routes are frequently combined. It is not easy to say whether it is better to mount by the Bosses and to descend by the Corridor, than to go the contrary way. During very high wind the Bosses route may be perhaps somewhat more hazardous than the Corridor. In time, there is little difference between one and the other.

Times.—Between the Grands Mulets and the Summit times are largely affected by the condition of the weather and the state of the snow. The same individual under different conditions may take *twice* the length of time that he will upon another. In fine weather, and with the snow in good order, the following are probable times.[1]

ASCENDING VIÂ THE CORRIDOR (EX. HALTS).

	h.	min.
Chamonix to the Pierre Pointue	2	
Pierre Pointue to Pierre à l'Echelle		50
Pierre à l'Echelle to the Grands Mulets	2	10
Grands Mulets to edge of Grand Plateau	3	15
Grand Plateau to top of Rochers Rouges	2	40
Rochers Rouges to Summit		50
Total	1	45

DESCENDING VIÂ THE BOSSES (EX. HALTS).

	h.	min
Summit to Refuge Vallot	1	10
Refuge Vallot to Grands Mulets	1	55
Grands Mulets to Pierre Pointue	1	50
Pierre Pointue to Chamonix	1	
Total	5	55

The way up Mont Blanc *viâ* the Aig. and Dôme du Goûter, commonly called **the St. Gervais Route**, is likely to come into greater prominence. In 1898, a path was constructed from the Pav. Bellevue up Mont Lachat to the top of les Rognes. Mule-path ends there. A path continues to the Tête Rousse, where there is an Inn, which was opened in August, 1899. This Inn, **Hotel-Châlet de Tête Rousse,** is situated at about 3170 mètres (10,400 feet), and is about 300 feet higher than the Grands Mulets, and one attains this elevation almost without touching snow. Reasonable prices. From St. Gervais to the Pav. Bellevue takes 2½ hs.; from Pav. Bellevue to the Châlet de Tête Rousse about 4 hs.; from Châlet de Tête Rousse to the *Cabane* on the Aig. du Goûter occupies 2½ to 3 hs.; and thence to the Refuge Vallot about 1¾ hs.

Expense.—The Chamonix tarif for Mont Blanc is 100 francs per Guide **(Cx. T. 1, courses ext.).** If two are taken by a single individual, and a night is passed at the Grands Mulets, the total cost will be little if at all under £12.

[1] Mont Blanc has been ascended on various occasions in one long day. On July 21, 1865, Mr. F. Morshead of Winchester left Chamonix at 12.30 a.m., arrived on the summit at 10 a.m. and returned to Chamonix at 4.25 p.m., thus making the ascent in 16 hours, including halts.

It is to be noted that the Chamonix Tarif takes various contingencies into consideration. If the tourist starts for Mont Blanc and gets no higher than the Grands Mulets, he will be charged 20 francs only, if he returns within one day (**Cx. T. 2, courses ext.**). If he gets to the Grand Plateau, the charge will be 50 francs (**Cx. T. 4, c. ext.**); to the top of the Corridor, or the top of the Bosses, 70 francs (**Cx. T. 5, c. ext.**). If he gets higher than these points the full 100 francs may be exacted. If the ascent occupies more than three days, each guide must be paid 10 francs extra, per day.

The tarif of St. Gervais is 80 francs per Guide if the ascent is made from St. Gervais and return is made to the same place; or 100 francs per Guide if the ascent is made from St. Gervais and descent is made to Chamonix.

A party on the Ascent of Mont Blanc, whether accompanied by a guide or not, should consist of not fewer than three persons; and this applies to all the excursions that are mentioned in this book upon which it is necessary to traverse snow-covered glacier.

Refuges.—The Observatory on the Summit, the Cabane on the Rochers Rouges, and the Vallot Observatory are private property, and admittance can only be obtained by favour.[1] The Refuge Vallot is on a different basis. There is right to admittance, but the building is small, it is far from being comfortable, and is generally in a very objectionable condition. The principal advantage in passing a night there is the opportunity it affords of arriving on the summit at an early hour to see the view. The *cabane* on the Aiguille du Goûter is open to all.

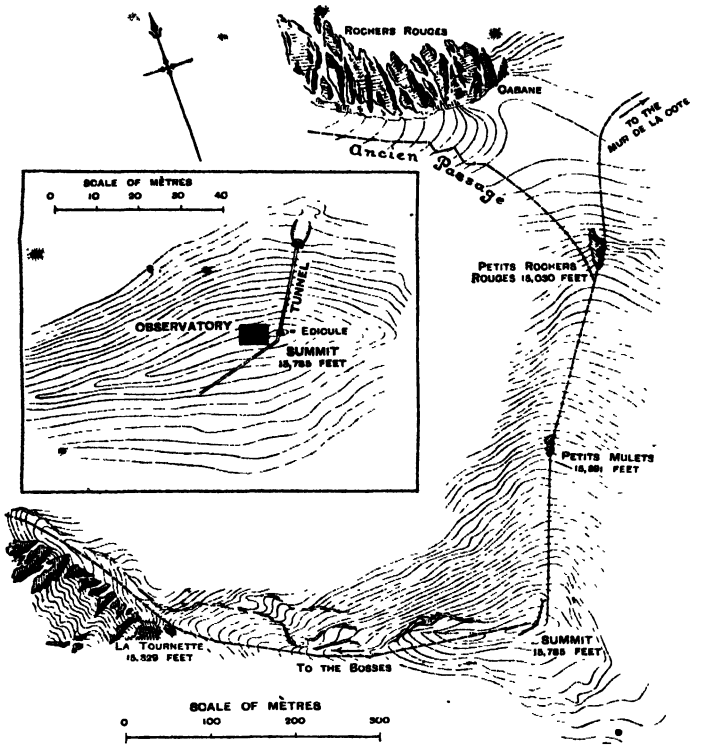
The Summit has been described by various authors as resembling the back of a donkey, a pear cut in half, and the back of a carp. I am unable to account for these aberrations of intellect. The summit is a ridge of snow 145 paces long, descending more steeply on the French than upon the Italian side. Its crest is nearly level, but the eastern is *slightly* higher than the western end. There is every probability that three rocky ridges meet almost immediately underneath the Observatory, and at no great distance below it. The little patch of rock on the Italian side called la Tourette is only 171 feet lower than the very highest point.[2] The summit of the Mont Blanc de Courmayeur lies in the same direction, and can be visited in a short hour. Rope should be employed.[3] The condition of the snow on the very top of Mont Blanc is usually good. The greater part of that which falls is blown or drifted away, and the small amount that remains behind speedily binds to the old snow underneath.

[1] Mons. Vallot publishes the following notification. "Les savants de toute nationalité sont admis à séjourner et à travailler à l'Observatoire. Ils doivent demander l'autorisation au directeur (M. J. Vallot, 61 avenue d'Antin, à Paris), en indiquant sommairement l'objet de leurs travaux. Ils devront emmener avec eux, à leurs frais, un des *guides-conservateurs* (Alphonse Payot, Michel Savioz, Jules Bossonney) qui se chargera de faire la cuisine et le service."

[2] By the courtesy of M. Eiffel, I am permitted to reproduce the accompanying Plan of the Summit, which was made for him in 1891.

[3] Though there are not at the present time any visible crevasses *close* to the summit-ridge, a few years ago it was intersected by a rather considerable one, which rendered it difficult to go from one end to the other.

View from the Summit.—Those who are early or late upon the summit stand the best chance of viewing the incomparable panorama that can be seen from it. Before mid-day, clouds almost always form over Italy.



PLAN OF THE SUMMIT OF MONT BLANC, BY X. IMFELD, 1891.

The nearest part of the *Northern* view embraces M. Blanc du Taeul, Mont Maudit, the Aig. du Midi, Dôme and Aig. du Goûter, Chamonix and the Valley, range of the Brévent, the Buet, Dent du Midi, the Aig. Verte, and basin of the Talèfre. Farther away, the Lake of Geneva and mountains of the Oberland. In the *Eastern* view the Col and Aig. du Géant, Grandes Jorasses, Grand Combin, all between the Weisshorn and Monte Rosa, part of the Val Ferret, the upper end of the Val d'Aoste, and (on the right) the M. Blanc de Courmayeur, are amongst the principal features. The *Southern* shews M. Blanc de Courmayeur on the left, the trough of the Italian Glac. de Miage, the Aigs. de Trélatête, part of the Val Véni, the Pyramides Calcaires, and Col de la Seigne; in the distance, the whole of the Graian Alps; and in the extreme distance, Monte Viso and the Maritime Alps are in the centre, and the Alps of Dauphiné on the right. The *Western* view has the summit-ridge in the foreground, Sallanches

in the middle distance, the Jura and a large part of France on the horizon. The *Southern* section is, perhaps, the most striking one, though at every point of the compass there is *something*.

The Shadow of Mont Blanc projected in the air appears only just after sunrise, and shortly before sunset. I have seen this remarkable apparition twice. The first time on Aug. 9, 1893, when promenading the summit-ridge at daybreak, watching the gradual development of the view. "Presently, a glow behind the Mischabelhörner indicated where the sun was about to rise. At the next turn, ranges began to take form, and in the direction of Aix-les-Bains an unknown mountain, as high as Mont Blanc itself, made its appearance. While returning to the east-north-east the orb of day came up with a bound; rays streamed between the peaks and separated the ridges, and gleaming tops broke out like watch-fires around the vast circumference. The next turn to the west shewed that the unknown mountain was a fraud: it was the shadow of Mont Blanc projected in the air. Before the sun had fairly risen the deception was not apparent. The huge, grey form, startling by its immensity, bore a most striking resemblance to a real mountain. The tones deepened as it sank, and in forty minutes it died away." Prof. Ch. Martins seems to have been the first who saw the shadow at *sunset* (in Aug., 1844), and he declared that the *Aurora Borealis* alone could vie with this magnificent phenomenon.

The Gallery (or Tunnel) which was driven in 1891 by orders of M. Eiffel (see pp. 71-3) was in a good state of preservation in 1893, and I could walk from one end to the other without stooping. In the following year its dimensions had diminished so much that one could not stand upright at any part, and entry had to be effected on all fours. On July 26, 1894, at 9.45 a.m., the temperature of the interior of the gallery, 35 feet from its mouth, was 2°·5 Faht., or 29°·5 F. below freezing-point. At the same time, the temperature of the external air in the shade was 18° F.

Precautions.—Mont Blanc is particularly liable to rapid changes in weather, and to sudden and extreme variations of temperature. *In a single hour*, the best weather often changes to the worst. Many persons are unacquainted with this fact, and start for an ascent without adequate protection (see page 62). Gloves should be taken. Felt boots are excellent for use on the summit, where the temperature of the snow a few inches below the surface is permanently twenty degrees and upwards below the freezing-point.

A Winter Ascent of Mont Blanc.—On Jan. 31, 1876, an ascent of Mont Blanc was made from Chamonix, by way of the Bosses. The temperature on the summit was −25° C., that is to say, 45° F. below freezing-point. See *Alpine Journal*, vol. vii, p. 439.

CHAPTER XIV.

THE TOUR OF MONT BLANC.

THE BATHS OF ST. GERVAIS—THE *SOURCES*—THE CATASTROPHE—VILLAGE OF ST. GERVAIS—ASCENT OF MONT JOLY—ASCENT OF AIG. DE BIONNASSAY—BIONNAY—CONTAMINES—COL DE MIAGE—THE GREATEST TUMBLE ON RECORD—NOTRE DAME DE LA GORGE—NANT BOURRANT—GLACIER AND COL DE TRÉLATÊTE—COL DU MONT TONDU—COL DU GLACIER—CHÂLET À LA BALME—COL DU BONHOMME—COL DES FOURS—MOTETS—CHAPIEUX—COL DE LA SEIGNE—LAC DE COMBAL—ASCENT OF AIG. DE TRÉLATÊTE—MORAINES OF THE MIAGE—DÔME ROUTE UP MONT BLANC—DÔME HUT—ASCENTS OF MONT BLANC BY THE GLAC. DU MONT BLANC, AND BY THE BROUILLARD GLACIER—MONT BLANC DE COURMAYEUR—BRENVA GLACIER—COURMAYEUR—ASCENT OF MONT SAXE—MONT CHETIF—THE CRAMMONT—COL DE CHÉCOURI—COL DU GÉANT—AIGS. BLANCHE AND NOIRE DE PEUTERET—LES DAMES ANGLAISES—THE AIG. DU GÉANT—MONT BLANC BY THE COL DU GÉANT AND AIG. DU MIDI—COL DE ROCHEFORT—COL DES FLAMBEAUX—COL DE TOULE—ASCENT OF MONT BLANC BY THE BRENVA GLACIER—ASCENT OF THE GRANDES JORASSES—COURMAYEUR TO THE COL FERRET—ASCENT OF MONT DOLENT—CHÂLETS DE FERRET TO ORSIÈRES—CHAMPEY—MARTIGNY—THE FORCLAZ—HOW TO GET AWAY FROM CHAMONIX.

A STURDY pedestrian can walk round the Range of Mont Blanc in four days. There is a carriage-road for most of the distance, and a mule-path the rest of the way.

1st day.—Chamonix *viâ* le Fayet and St. Gervais to Nant Bourrant.

2nd day.—Nant Bourrant by the Cols du Bonhomme and de la Seigne to Courmayeur.

3rd day.—Courmayeur over the Col Ferret to Orsières, or Champex.

4th day.—Orsières (or Champex) *viâ* the Great St. Bernard Road, the Forclaz, and the Tête Noire (or the Col de Balme) to Chamonix.

If *three* days are taken between Chamonix and Courmayeur, the first night is usually passed at Contamines, and the second at les Chapieux or les Motets.

Chamonix to the Baths and Village of St. Gervais, Contamines, and Nant Bourrant (Cx. T. 75, 76, 77, 80). Chamonix to le Fayet, see pp. 88, 112. The entrance to the **Baths** of St. Gervais is about a quarter of a mile from the Railway-station, just where the Bon Nant Torrent debouches on to the plain of Sallanches; and, as it has rather the air of an entrance to a private park, people are sometimes timorous about entering. Admittance now costs 25 centimes.



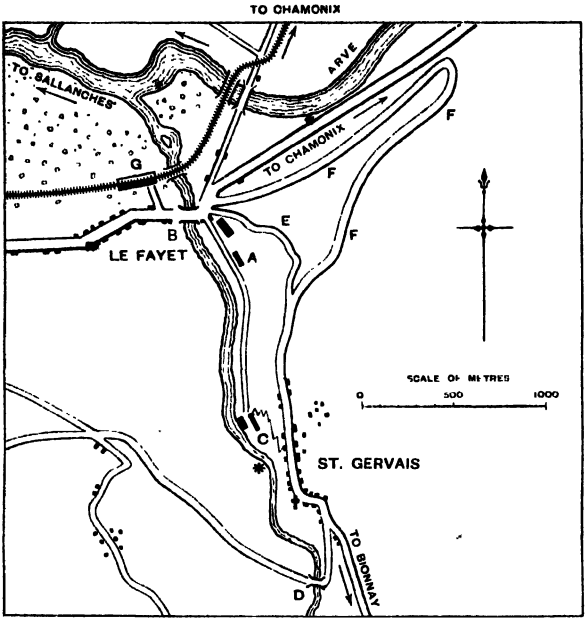
ENTRANCE TO THE BATHS OF ST. GERVAIS.

From the Bridge of Bon Nant at le Fayet there are three ways by which one can get to St. Gervais the **Village**. One through the grounds of the Baths, past A and C and by the zigzag path marked on the Plan; or by E, the old road, short and steep (about 25 min. going up, or 15 min. coming down); or by F F, the new road, which has easy gradients, and is much longer than the other ways. There are no houses on the old road; but about one-third way up F there is the HOTEL AND PENSION DES PANORAMAS. I recommend the way through the grounds of the Baths in preference to the other roads.

A few hundred feet from the entrance there are, at A, the **Baths**, in a newly-constructed, handsome, and well-arranged building.[1] The *sources* are at C, near the entrance to the Gorge of Crepin (marked by an asterisk). They are said to have been discovered in 1806 by a workman of Servoz, when trout fishing.

[1] "L'Etablissement thermal, construit sur les plans de M. Jory, est une merveille d'élegance sobre et de commodité. Impossible de rêver rien de plus parfait au point de vue hydrothérapique: cabines de bains, salles de douches de toute nature, salles de pulvérisations, d'inhalations, bains de vapeur du système Berthe si apprécié, massage savant, tout est réuni dans ces Thermes pour assurer l'emploi complet des propriétés thérapeutiques de l'eau minérale, l'observation mathématique des ordonnances médicales, le bien-être et les aisés des baigneurs."

Mons. Gontard (Gonthard), the proprietor, speedily turned them to account, and founded the Bathing establishment. The principal spring is named after him *la source Gontard*, and yields 140,000 litres per day, temp. 102° F. The *source du Torrent* gives 10,000 litres a day, same temp.; and the *source de Mey* supplies 30,000 litres a day, temp. 107° F. For over 90 years the waters of these springs have been known to possess valuable properties.[1] Whether he 'takes



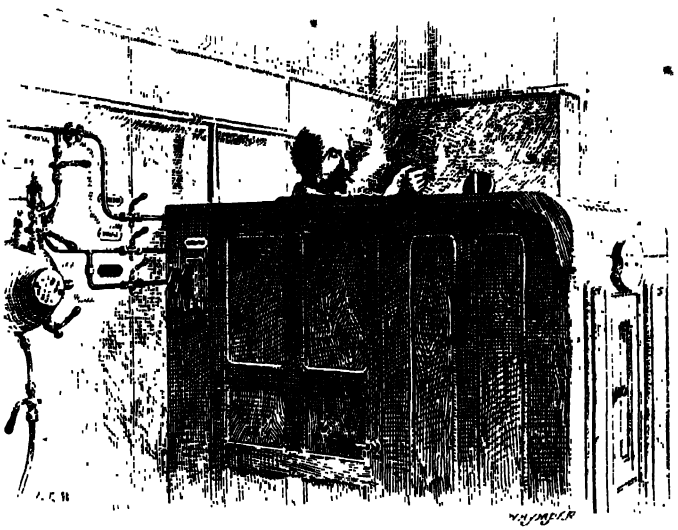
A. THE NEW BATHS B. BRIDGE OF BON NANT. C. HOTELS OF THE BATHS
D PONT DU DIABLE F. OLD ROAD TO ST GERVAIS F.F. NEW ROAD TO ST GERVAIS.
G RAILWAY STATION FOR CHAMONIX, SALLANCHES, GENEVA, ETC.

the waters' or not, a pedestrian may do worse than revive himself here, before continuing his walk, with a Vapour Bath on the *système Berthe*,—which is warranted not to asphyxiate.

The Hotels of the Baths are a kil. from the Baths themselves, at the entrance to the Gorge of Crepin. Formerly the Baths and Hotel were united in one establishment, and their appearance, prior to 1892, is shewn in the view upon p. 144, which I am permitted to

[1] It is claimed that they are beneficial for the following complaints and disorders. 1. *Maladies de la peau:* Eczéma, urticaire, psoriasis, pityriasis, éruptions furonculeuses, prurigo, lichen, herpès, acné, couperose, etc.; 2. *Maladies des voies digestives:* Dyspepsie, gastralgie, entérite, engorgement du foie, pléthore abdominale, constipation, etc.; 3. *Maladies des voies urinaires:* Gravelle, catarrhe de la vessie; 4. *Maladies de l'utérus:* Catarrhe utérin, engorgement du col, métrites liées aux affections de la peau; 5. *Maladies des voies respiratoires:* Angine granuleuse, laryngite, catarrhe bronchique, catarrhe nasal, ozène, etc.; 6. *Maladies nerveuses:* Névroses d'origine arthritique.

reproduce by the courtesy of M. Tairraz, of Chamonix. On the night of July 11, 1892, the whole of the central (and oldest) portion of these buildings, and the farther ends of the two wings, were erased by the sudden bursting of a sub-glacial reservoir in the little Glacier de Tête Rousse (see p. 112). The flood first coursed down the Valley of Bionnassay, and at its mouth half obliterated the Village of Bionnay. It then joined the Bon Nant Torrent, and did little further mischief until it was compressed between the walls of the Gorge of Crepin; from the lower extremity of which it issued with tremendous violence,

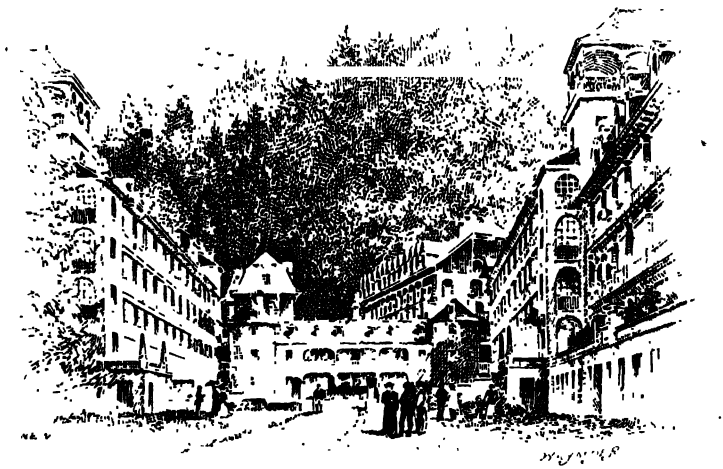


THE SYSTÈME BERTHE.

and in a few minutes battered the Baths to ruin, and swept away and drowned the greater part of the visitors. Those who were in the building on the left escaped; but, with few exceptions, all who were in the central and in the farthest blocks perished. How many were lost is unknown. It is supposed that at the Baths alone the number exceeded one hundred and twenty. The buildings on the left, and those at the near end of the right hand have been restored, but there is now an open space where the others stood—not a trace of them remains. There is another Hotel (opened in 1900) belonging to the Bathing Establishment Co., just at the entrance to the grounds, called GRAND HOTEL DE LA SAVOIE.

For the Hotels of St. Gervais see p. 112. At the back of the village there is unlimited space for walks on the down-like mountains which stretch from the Pav. Bellevue to Châtelard on the high road. The best excursions in the contrary direction are the charming walks to Combloux and Megève, and the Ascent of Mont Joly. For either of them you begin by going over the Devil's Bridge (D on the Plan).

Mont Joly, 8291 feet (**Cx. T. 73, 74**), is the loftiest point on the left bank of the Val Montjoie. It lies due E. of Contamines, but its ascent is generally made from St. Gervais, by passing over the Devil's Bridge, and by a road as far as the villages of Orcin and les Granges; after that by path and grass-slopes. In the middle of the day this is a hot route. Time from St. Gervais to the Pavillon 3¼ hs. The PAVILLON DU MONT JOLI, plank châlet opened in 1895, 12 beds, very civil and obliging proprietor; logement 2 fr. 50; petit déjeuner 1 fr. 25; déjeuner à la fourchette 2 fr. 50; dîner 3 fr. 50; vin ordinaire 1 fr. 25. Pension 10 frs. a day, including wine. From the Pavillon to the summit, by a track, takes about 1 h.; summit to Pavillon 25 min. Wooden cross and *homme de pierre* on the top. The view is most extensive; and, besides embracing the Aig. de Bionnassay, the Col de Miage, and a side



THE BATHS OF ST. GERVAIS BEFORE THE CATASTROPHE.

of Mont Blanc which cannot be seen to such advantage from any other point, extends over a great part of Savoy, and to the Alps of Dauphiné. There is another route *viâ* **St. Nicholas de Véroce**, CAFÉ DU MONT JOLY; CAFÉ NATIONAL, which is more shaded. A carriage-road connects St. Gervais with St. Nicholas, thence there is a mule-path to the Pavillon. Time about 3¾ hs. In descending, a pedestrian can get from the Pav. to St. Nicholas in 35 min., thence to the road at Bionnay in 30 min., and to St. Gervais 45 min. Few English have hitherto visited Mont Joly.

The principal *ascent* that can be made from St. Gervais (after Mont Blanc) is that of the **Aig. de Bionnassay**, 13,324 feet (**Cx. T. 38, courses ext.**; **Cr. T. 70 frs.**), which is exceeded only in elevation by the Aig. Verte (13,540) and the Grandes Jorasses (13,799). This splendid peak, from some directions, looks finer than Mont Blanc itself. The first ascent was effected on July 28, 1865, by Messrs. Edward North Buxton, F. C. Grove, and R. Macdonald, with the guides J. P. Cachat and Michel Payot.

They "left the Pavillon Bellevue at 1.20 a.m., and followed the usual route to the Aig. du Goûter as far as the foot of the Tête Rouges" [?]. "They then



THE GORGE OF CREPIN, ABOVE THE BATHS OF ST. GERVAIS.

crossed the Glac. de Bionnassay, and ascended an excessively steep glacier which falls from the *arête* connecting the Aig. de Bionnassay with Mont Tricot. The *arête* was attained at 10, and the summit at 3.15 p.m. It was not considered advisable to descend the same way. The *arête* was therefore quitted at a point rather higher than that at which it had been reached, and a descent was effected on the S.W. side, over rocks, to the head of the French Glac. de Miage, which was reached at nightfall. The night was spent on some rocks above the level of the Col de Miage, and the party reached St. Gervais at noon the following day." *Alpine Journal*, vol. ii, pp. 132-3. The track of the first ascent is given on the folding Map.

The ascent of the Aig. de Bionnassay is rarely made, and it is generally accounted difficult.

From St. Gervais to **Bionnay**, 3192 feet, takes 50 min. (no inn; wine can be had, good and cheap). Half way between the two places you pass the village of les Praz. Above Bionnay the Val Montjoie narrows, road good, and well-wooded up to and a little beyond Nant Bourrant. It takes 1 hour easy going from Bionnay to **Contamines**, 3539 feet, HOTEL DU BON HOMME, civil proprietor, prices lower than the average. Contamines is 5⅛ miles from St. Gervais.

[Col de Miage (Cx. T. 21, Cr. T. 50 frs.).[1] About 2 kils. beyond Bionnay, opposite to St. Nicholas, there is the entrance of the vallon leading to the Col de Miage. Two paths, one on each side of the stream, go to the châlets of Miage.[2] Thence to the top of the Col, 11,076 feet, takes about 4½ hs. The summit of the Col lies S.S.W. of the Aig. de Bionnassay, and the ascent to it from the upper plateau of the French Glac. de Miage is made by a rocky rib, that has at its side a long and steep ice-slope, upon which there has occurred one of the biggest tumbles on record.

On the 11th of July, 1861, a large party of tourists was assembled on the top of the Col de Miage,[3] with the object of discovering whether an ascent of Mont Blanc could be made from this direction. Whilst the rest were stopping for breakfast, one of the party, Mr. Birkbeck, went aside, and the others did not at first remark his absence. When it was noticed, his track was followed, and it was found that he had fallen down precipitous slopes of snow and ice, and was descried nearly half a mile away, at the foot of the slopes, at the head of the French Glac. de Miage. His friends went to his assistance as quickly as possible, but nearly 2½ hs. elapsed before they could reach him. *Between the place where Mr. Birkbeck commenced to slide or fall and the place where he stopped there was a difference of level of about* 1700 *feet!* The slope was gentle where he first lost his footing, and he tried to stop himself with his fingers and nails, but the snow was too hard. "Sometimes he descended feet first, sometimes head first, then he went sideways, and once or twice he had the sensation of shooting through the air." He came to a stop at the edge of a large crevasse. When reached, it was found that he was almost half-skinned by abrasion and friction. "By his passage over the snow, the skin was removed from the outside of the legs and thighs, the knees, the whole of the lower part of the back and part of the ribs, together with some from the nose and forehead. He had not lost much blood, but he presented a most ghastly

[1] **Cr. T. 50 frs.** is an abbreviation of Courmayeur Tarif des Courses.

[2] A small mountain-inn, called the Châlet de Deux Frères (formerly a shooting-box belonging to Count de Nicolay), was opened in 1898 on the Col de Tricot, between the Glac. de Bionnassay and the Châlets of Miage.

[3] Consisting of Sir Leslie Stephen, Messrs. F. F. Tuckett, F. Mather, J. Birkbeck, and the Rev. Charles Hudson; accompanied by the guides Melchior Anderegg, Mollard, Hoste, J. J. Bennen, and Peter Perrn. Birkbeck was a very young man in charge of Hudson.

spectacle of bloody raw flesh." He was transported to St. Gervais, and remained there in a critical condition for some weeks, but ultimately recovered better than might have been expected.

The descent from the Col to Courmayeur occupies about 6 hs., and leads down the entire length of the Italian Glac. de Miage to the Val Véni near the Lac de Combal; and thence down the valley by a good path, past la Visaille, 5423 feet. The existence of this pass has been known for about a century, but it is not frequently used. One can go on foot this way from Courmayeur to Chamonix in 19 hs. (see *Peaks, Passes and Glaciers*, 2nd ser. vol. i, pp. 194-207). There is a *cabane* called the **Refuge Durier** on the summit of the Col de Miage, which was opened in Aug. 1899.]

From Contamines to **Notre Dame de la Gorge** takes 45 min. Carriage-road ends there. Notre Dame to **Nant Bourrant (Borrant)**, 1457 mètres, 4780 feet, takes 40 min. HOTEL-CHALET NANT BOURRANT, good beds, reasonable prices. Before arriving there stop a minute to look over the bridge. There is now no other place where refreshments can be had before Chapieux or les Motets, except the Châlet à la Balme; and most of the way is bare and shadowless. Upon these accounts it is preferable to start from Nant Bourrant rather than from Contamines for the second day.

[Nant Bourrant is immediately opposite to the end of the **Glac. de Trélatête**, one of the larger glaciers of Mont Blanc, which is not much visited, and is incorrectly delineated upon all maps. The **Pavillon de Trélatête**, 6483 feet, is a small place, sometimes closed. One path leads to it from Nant Bourrant in about 1½ hs., and another from Contamines in rather more than 2 hs. One can get to the Italian side of the chain over the Glac. de Trélatête either by the Col du Mont Tondu, or by the **Col de Trélatête**, 11,477 feet. The latter is an unprofitable short cut, which was first effected by Messrs. C. E. and G. S. Mathews on Aug. 28, 1861. They started from a châlet near the Col de la Seigne at 5 a.m., and occupied 15 hs. in getting over to the Glac. de Trélatête. The night was passed out of doors, three hours above the Pavillon. Much quicker passages can be made, but as a route there is little to be said in its favour. The **Col du Mont Tondu**, about 9400 feet (**Cx. T. 25, courses ext., Cr. T. 25 frs.**), crosses a depression a short distance to the E. of Mont Tondu, 10,486 feet, and descends over the little Glac. des Lancettes, from which one can either go down to les Motets, or coast round the slopes to the east to the summit of the Col de la Seigne. By this way, it takes 7 to 8 hs. from Contamines to the top of the Col de la Seigne. The Col du Mont Tondu was originally called Col de Trélatête, and is described under that name in the first ed. of Ball's *Guide to the Western Alps*, 1863. There is another way from the Trélatête Glac. to the Col de la Seigne by the **Col du Glacier**, a pass which is seldom used, and is somewhat longer than the Col du Mont Tondu.]

Nant Bourrant to Courmayeur by the Cols du Bonhomme, des Fours, and de la Seigne.—From Nant Bourrant to the **Châlet à la Balme (Barme)**, 50 min., the path rises moderately. The châlet is a poor place. Beds. Simple food. After passing it, there is a steep rise for 30 min., and then for a long distance the way is marked by stakes (*'poteaux'*). The gradients again become more moderate, and the path winds round a sort of *cirque* (Plan Jovet) at the base of Mont Tondu and the Tête d'Enclave [hence there is a short cut to Motets over the Col d'Enclave]. At the farther side there is another steep rise, and at the top of this the Col du Bonhomme begins to be

seen, still, however, the best part of an hour away. Keep to the left, against the slopes, and avoid paths on the right. The summit of **the Col**, 7677 feet, is undulating for some distance, no one part being much higher than another; and before it begins distinctly to descend on Chapieux a path goes off to the left, and leads in about 30 min. to the **Col des Fours**, 8891 feet, cairn. A steep descent on the eastern side brings you in 1 h. 50 min. to the bridge over the Torrent des Glaciers at the châlets **les Glaciers**, 5843 feet; and in about 20 min. more to **les Motets (Mottets)**, 6227 feet. This is the way usually followed by pedestrians. It takes longer to arrive at les Motets going *viâ* **les Chapieux**, 4951 feet; and the auberges there—HOTEL DU SOLEIL, HOTEL DES VOYAGEURS, are poor places. There are barracks at Chapieux. Time Col du Bonhomme to Chapieux, 1 h. 40 min.; thence to les Motets 1 h. 25 min.

Though the passage of the Cols du Bonhomme and des Fours is simple enough in fine weather, *when the path can be seen*, one may easily stray when it is covered with snow. For this reason a large part of the way near the top is marked by posts. Anyone may cross it alone in fine weather, but if it is at all snowy or misty guides are desirable. According to Bourcit (*Nouvelle Descript on*, p. 233) the name Bonhomme was given to the pass because there was upon it, in olden times, a hospice and a hermit devoted to the assistance of travellers.

The way from the Châlet à la Balme is comparatively dull. At Motets it begins to be interesting, and at the top of the **Col de la Seigne**, 8242 feet (which is reached in about 1 h. 45 min.), a grand view opens out of the upper part of the Val Véni (the Allée Blanche) down to the Lac de Combal, and the Italian side of Mont Blanc. The top (the real summit) of the Grandes Jorasses can be seen, and, in the distance, the Grand Combin and Mont Vélan. On the right hand of the Val Véni the Mont Chetif is a prominent feature; and, in the centre, the Aig. Noire de Peuteret between the two Pyramides Calcaires. No apprehensions of losing the way need be entertained here. Make for the bottom of the Valley. The path is at first on the left bank of the stream. At the lower chalets de l'Allée Blanche it crosses to the right bank. Arrived there, stop a few minutes to look at the Aig. de Trélatête, and the great Moraines of the Glacier de Miage.

[The **Aiguille de Trélatête**, 12,900 feet **(Cr. T. 50 frs.)**, is the loftiest peak at this end of the chain. It was first ascended on July 12, 1864, by Mr. Adams-Reilly and myself, with the guides Michel Croz, Michel Payot, and H. Charlet, in order to obtain a view of the Western side of Mont Blanc, which at that time was quite unknown. We camped near the top of Mont Suc (the mountain which will be seen on the N.W. side of the Lac de Combal), at about 9500 feet, and on the morning of the 12th crossed the northern branch of the Glac. de l'Allée Blanche, ascended the S.E. summit of the Trélatête, 12,782 feet, and crossed over it to the highest point. Time from Courmayeur 9½ hs. The route is marked on the folding Map. Of the Western side of Mont Blanc, Mr. Reilly said—

"For four years I had felt great interest in the geography of the chain: the year before I had mapped, more or less successfully, all but this spot, and this spot had always eluded my grasp. The praises, undeserved as they were, which" (the first draft of) "my map had received, were as gall and

wormwood to me when I thought of that great slope which I had been obliged to leave a blank, speckled over with unmeaning dots of rock, gathered from previous maps -for I had consulted them all without meeting an intelligible representation of it. From the surface of the Miage Glacier I had gained nothing, for I could only see the feet of magnificent ice-streams; but now, from the top of the dead wall of rock which had so long closed my view, I saw those fine glaciers from top to bottom, pouring down their streams, nearly as large as the Bossons, from Mont Blanc, from the Bosse, and from the Dôme.

"The head of Mont Blanc is supported on this side by two buttresses, between which vast glaciers descend. Of these the most southern takes its rise at the foot of the precipices which fall steeply down from the Calotte, and its stream, as it joins that of the Miage, is cut in two by an enormous *rognon* of rock. Next, to the left, comes the largest of the buttresses of which I have spoken, almost forming an aiguille in itself. The next glacier descends from a large basin which receives the snows of the summit-ridge between the Bosse and the Dôme, and it is divided from the third and last glacier by another buttress, which joins the summit-ridge at a point between the Dôme and the Aiguille de Bionnassay." *Reilly.*

We agreed to name 'the most southern' of these glaciers the **Glacier du Mont Blanc,** and 'the next one' the **Glacier du Dôme.**[1] These names have been generally adopted. 'The third' glacier is nameless, but is sometimes called the Italian Glacier de Bionnassay. The great buttresses betwixt these magnificent ice-streams have supplied a large portion of the enormous masses of debris which are disposed in ridges round about, and are strewn over, the termination of the Glacier de Miage in the Val Véni. These moraines used to be classed amongst the wonders of the world.

The Dôme route up Mont Blanc (Cr. T. 100 frs.), the most frequently used of the ways up the mountain on the Italian side, leads by the Ital. Glac. de Miage to the base of the rocks (Aig. Grise) on the western side of the Glac. du Dôme. These rocks are ascended to a Cabane **(Cabane du Dôme, or Dôme hut),** about 10,900 feet, which has been erected by the Turin section of the Italian Alpine Club. On the following morning the ascent is continued by the Glac. du Dôme to its head, and the ridge is struck that leads from the Dôme du Goûter to the Aig. de Bionnassay, about mid-way between the two peaks. The *arête* of this ridge (very narrow)[2] is followed nearly to the summit of the Dôme (which is passed a little to the right) and thence the ascent is completed in the usual way by the ridge of the Bosses. Time, Courmayeur to Dôme hut about 7 hs.; hut to summit 7 to 8 hs., or more under unfavourable conditions. This route is marked on the folding Map.

The route up **Mont Blanc by the Glacier du Mont Blanc** is more direct, but is less frequently followed, than the Dôme route. Mr. T. S. Kennedy, a rapid walker, who first went this way in 1872, took 4½ hs. from Courmayeur to his bivouac on the rocks between the Glacs. du Dôme and du Mont Blanc, about 1 h. above the Glac. de Miage, and 10½ hs. thence to the summit. Two *cabanes* have been erected upon the rocks on the W. side of the Glac. du Mont

[1] The two glaciers were so named upon Reilly's Map (1865), and on the Mont Blanc Map to *Scrambles* (1871). In Mieulet's Map (1865) no names were given to these glaciers, and they are also unnamed on the Italian Govt. Map, scale $\frac{1}{100000}$ (1885), and the Ital. Govt. Map, scale $\frac{1}{50000}$ (corrected to 1894).

[2] Count Villanova and J.-J. Maquignaz perished here in 1890. See p. 60.

Blanc by the Italian Alpine Club, one about 1½ hs. above the Mage Glac., and the other (called the Quintino Sella hut) about 1 h. higher (11,100 feet).

The route up **Mont Blanc by the Glacs. de Brouillard (Broglia) and de Fresnay** is very seldom taken. It was invented in 1877 by Mr. J. Eccles, who took 10 hs. (and on a previous occasion 11¼ hs.) from Courmayeur to his *gîte* on the ridge between the two glaciers, at a height of about 12,400 feet;



THE CABANE DU DÔME.

and from that spot 9 hs. 40 min. more to the summit of Mont Blanc, which was arrived at by going over the top of the Mont Blanc de Courmayeur.[1] The times mentioned for these two routes include halts, but in each case the halts were brief.]

[1] The name Mont Blanc de Courmayeur is given to the end of a buttress of Mont Blanc, forming a cliff about ¾ kil. from the summit on the S.E. side. There is a considerable discrepancy between the French and Italian determinations of its elevation.

Height of Mont Blanc according to Mieulet	15,781 ft.	According to Ital. Map			15,772 ft.
Do. M. Blanc de Courmayeur	do. 15,604 ,,	do.	do.		15,450 ,,
Difference of level . .	177 ,,	do.	do.		322 ,,

I think that the difference of level *exceeds* the higher of these two determinations.

In drawing his frontier line, Capt. Mieulet made it pass over the Mont Blanc de Courmayeur. On the Italian Map the line is drawn through the summit of Mont Blanc. On my Map I follow the older authority (Mieulet).

At the eastern end of the Lac de Combal the path to Courmayeur crosses to the left bank of the stream, and skirts the huge moraines of the Glac. de Miage for about 3 kils. It then recrosses to the right bank, and in a few minutes arrives at **la Visaille.** The RESTAURANT DU CHÂLET DE LA VISAILLE is not prepossessing in appearance, but is kept by a civil hostess, who supplies good, plain food at honest prices. Char road commences a little lower down (in shade rest of the way down the Val Véni) and in 40 min. brings you to the bridge for the Brenva, CHÂLET DE PURTUD (cantine), and in 25 min. more to the **Chapel of Notre Dame de Guérison,** opposite to which there is another bridge for **the Grotto** in the Brenva Glacier. The views of the Aig. de Peuteret and Brenva Glac. whilst descending this part of the valley are extremely grand. The road soon turns sharply to the right, and in 35 min. more you are at Courmayeur.

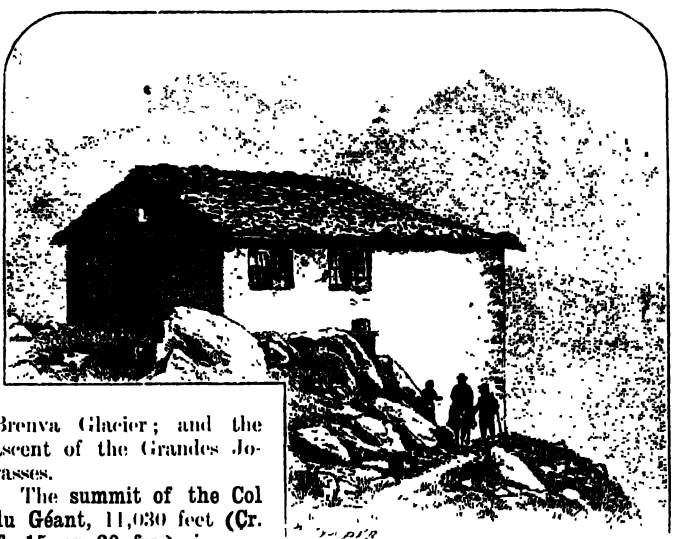
	h.	min.
Nant Bourrant to Châlet à la Balme		50
Balme to Motets by the Cols du Bonhomme and des Fours	4	30
Motets to top of Col de la Seigne	1	45
Col de la Seigne to la Visaille	2	10
La Visaille to Courmayeur	1	40

Courmayeur, 4045 feet; Pop. 1201.—HOTEL ANGELO; HOTEL DU MONT BLANC (10 min. N. of Courmayeur); GRAND HOTEL ROYAL; HOTEL DE L'UNION. The ROYAL is the best hotel in this district. This village is frequented by many Italians, who get there easily from Venice, Milan, Turin, etc., by rail to Aosta, and thence by diligence. At Pré St. Didier (40 min. on the road to Aosta) there are mineral springs and Baths. Numerous excursions can be made. See Appendices C and G for 'Tarif des Courses' and List of Guides. The summit of Mont Blanc cannot be seen from the village. The most prominent object in view is the Aiguille, or Dent, du Géant,—a gigantic tooth which all the dentists in the world cannot draw, or even scale. Of short and easy excursions, the ascents of Mont Saxe, Mont Chetif, and the Crammont; and walks to the Brenva Glacier, and up the Val Véni to the moraines of the Miage are the best. They can be made at any hour of the day.

The Ascent of Mont Saxe (Monts de la Saxe), 7736 feet **(Cr. T. 6 frs.),** can be made a *short* excursion by following the track shewn on the folding Map, or it may be turned into a longer one by going along the top of the mountain to what is called the Tête Bernarda, 8314 feet, descending upon Praz Sec, and returning by the road down the Val Ferret. This is one of the finest excursions that can be made anywhere. It gives from beginning to end a succession of magnificent views of the Italian side of Mont Blanc. The road home is good and pleasant. Mont Saxe is an excellent hunting-ground for botanists and entomologists. The ascent to the near end of the mountain will take 2½ to 2¾ hours. **Mont Chetif,** 7687 feet **(Cr. T. 6 frs.),** is immediately opposite to the Brenva Glacier, and for viewing it and the S.E. side of Mont Blanc is in some respects superior to Mont Saxe; but its summit is not extensive, and one has not the same liberty of motion. Time ascending about 3 hours. **The Crammont (Tête de Crammont),** 8980 feet **(Cr. T. 8 frs.),** lies

S.W. of Courmayeur, and due S. of Mont Chetif, which it overlooks. This ascent is commenced by descending to Pré St. Didier, thence ascending the Little St. Bernard Road for ½ h., and afterwards going by the châlets of Chanton, 5971 feet. Time, Courmayeur to summit, about 4½ hs. A variation on the ordinary way to the Allée Blanche and the Glac. de Miage can be made by going round the S. side of Mont Chetif *viâ* the **Col de Chécouri (Chécruit)**. Cross the village bridge to the hamlet of Dolonne. Thence to the Col is about 2 hs. Fine views from the top of the Glac. de Miage, Aigs. de Trélatête, and Peuteret. Descent can be made in several directions, either by paths or down the slopes, to the Lac de Combal in about 2½ hs. Return by the usual way down the Val Véni.

Of longer excursions, the finer ones are, to the summit of the Col du Géant; the ascent of the Aiguille du Géant; Mont Blanc by the Brenva Glacier; and the ascent of the Grandes Jorasses.



THE PAVILLON DU MONT FRÉTY.

The **summit of the Col du Géant**, 11,030 feet **(Cr. T. 15 or 20 frs.)**, is seen from Courmayeur above Mont Fréty. So far as the **Hotel** (or Pavillon) **du Mont Fréty**, 7129 feet, there is a mule-path; higher up there is a track all the way to the Col. To the **Pavillon (Cr. T. 6 frs.)**[1] is a regular excursion; 2½ hours coming up, 1½ hs. going down. The view from this place includes the Aig. du Géant, the Grandes Jorasses, and Grand Combin, but all can be seen to greater advantage elsewhere. From the Pavillon to the summit of the Col takes about 3 h. 15 min., mainly over rocks (early and late in the season mingled with snow), easy to climb. There is a *cabane* at the top of these rocks, a few feet below the summit on the Italian side, which can be seen from Courmayeur and from the Mont Fréty Hotel, and forms a good object to steer to. It was

[1] This is not a nice place. Bring food from Courmayeur.

erected in 1876, and has been subsequently extended. In Aug. 1888, H.M. the Queen of Italy slept at the Mont Fréty Hotel on the 15th, and started at 4 a.m. the next morning for the Col with 27 persons, under the leading of Henri Séraphin. Bad weather came on, and they were forced to pass the night in the *cabane*. On the 17th they returned to Courmayeur.

Another *cabane* has been erected by the Italian Alpine Club a little below the summit of the Col, on the Italian side. This is a substantial two-story building, called **Rifugio Torino.** It was inaugurated on Aug. 28, 1899, and on that day was visited by more than 100 Members of the I.A.C. or their friends. It is to be kept open from July 15 to September 15; and, as it is close to the summit of the most practical pass across the Range of Mont Blanc, it will be found a great convenience. The construction is solid, and of a superior kind for a building of its order. Considering that this Hotel is nearly 11,000 feet above the sea, its *Tarif* is very moderate.

TARIF AT THE RIFUGIO TORINO, COL DU GÉANT.

	frs	cts.		frs	cts.
Right of entry	1		Red or White Wine (bottle)	2	
Bed	4		do. do. (half bottle)	1	20
Couvert*	1		Hot Wine (bottle)	2	50
Bread		30	do. (half bottle)	1	50
Soup		75	Champagne (Pomery and Greno)	20	
Two Mutton Cutlets	1	25	Asti (sparkling)	5	
Biftek	1	75	Barolo	5	
Chicken	5		Capri	4	
An Egg		25	Barbera	4	
Two Eggs and Butter		80	Marsala	4	
Omelette confiture	1	50	Bottled Beer	2	
Cheese (Gruyère or Gorgonzola)		40	Gazeuse	1	50
Butter		40	Glass of Vermouth		50
Honey		10	do. Cognac	1	
Biscuits		10	do. Whiskey	1	

* Tourists who spend not less than 4 francs upon themselves will not have to pay for 'couvert.'

Guides and Porters of all countries carrying books 'visé' by the proper authorities do not pay for 'entry' and 'couvert,' and are entitled to a reduction of 25 per cent on provisions. Shelter is fixed at 50 centimes per night.

"The Col du Géant," said Sir Leslie Stephen, "is and must always remain one of the first two or three, if not actually the first, in beauty of all Alpine passes. The partiality of new discoverers has set up rivals to it at one time or another; but its grandeur and variety are always fresh, and nowhere, in my knowledge, to be fairly equalled." This applies to the Pass as a whole. For the French side see pp. 119-120. The view on the Italian side is very extensive. The principal features seen from the *cabane* are the exceedingly jagged ridge between the Glacs. de la Brenva and de Fresnay, with the Aigs. de Peuteret; and the audacious pinnacle the Aiguille du Géant.

The **Aig. Blanche de Peuteret,** 13,478 feet, is one of the principal points on the ridge descending towards S.E. from the Mont Blanc de Courmayeur. The name is of recent origin. It was first ascended by Sir H. Seymour King, with the guides Ambrose Supersax, Aloys Anthamatten (?) and Emile Rey, on July 31, 1885. (See pp. 58-9 for the death of Prof. Balfour.) The **Aig. Noire de Peuteret,** 12,392 feet (**Cr. T. 70 frs.**), is a very fine pinnacle lower down the same ridge, and from some points is scarcely less imposing than the Aig. du Dru. It was formerly known as *the* Aig. de Péteret. The first ascent was

made by Lord Wentworth, with Emile Rey, and J.-B. Bic of Val Tournanche. A rat was noticed three yards from the summit, "which slipped into a cleft of rock as soon as it saw me. Equally close to the summit I gathered some moss with pink and yellow flowers(!) then in full blossom. Fifty yards lower down I found some ranunculuses, also in flower!" Lord Wentworth in the *Alpine Journal*, vol. ix, p. 2. (See p. 62 for the death of Signor Poggi.) The scraggy pinnacles between the Aigs. Noire and Blanche de Peuterot have been named by Capt. Mieulet **'les Dames Anglaises.'**

The Aiguille (or Dent) du Géant, 13,166 feet (**Cx. T. 45, courses ext.; Cr. T. 70 frs.**). This peak, one of the most striking forms in the Chain of Mont Blanc, is situated about 1¼ m. to the N.E. of the summit of the Col du Géant. It was first ascended by MM. Alessandro, Corradino, Alfonso (17 years old) and Gaudenzio Sella, with the guides J.-J. Maquignaz, B. Maquignaz and Daniel Maquignaz of Val Tournanche, on July 29, 1882. Before the ascent was made, the guides worked four days in mining the rock, and driving in iron stanchions to which ropes were attached. This party reached the *lower* of the two rocky teeth which form the summit, and left about 100 mètres of rope behind.

The *higher* of the two rocky teeth was ascended by Mr. W. W. Graham, with the guides Alphonse Payot and Auguste Cupelin of Chamonix, on Aug. 20, 1882. Mr. Graham said, after reaching the 'stone man' erected by the Sellas, "straight in front of us rose the other tooth, about 20 feet higher, separated from us by an extremely awkward notch. The most obvious line of descent was blocked by a huge loose slab which vibrated, and we consequently had to let ourselves down a vertical drop of about fifteen to twenty feet, and then found ourselves on the little *arête* between the two teeth. This was of rock topped with ice and gradually narrowed from a foot to a few inches. . . . We were compelled to bestride the *arête*."

The height of the loftier of these two teeth seems to have rapidly diminished. Mr. J. W. Hartley ascended both of them on July 4, 1883, and said, "We were much struck by the *very* small difference in height between the two peaks. We . . . estimated it at from 5 to 8 feet. . . The passage from one peak to the other we found this year quite the easiest part of the mountain."

The *cabane* on the Col du Géant is usually made the starting-point for this ascent, which has become an established excursion. By the kind permission of Sig. Vittorio Sella, I am able to give the accompanying illustration, shewing the routes which were taken by MM. Sella and by Mr. Graham. A is the highest point, and B the summit reached by Messrs. Sella. Where the routes separate in the *middle of the engraving*, the left hand one is that taken by Mr. Graham; and his is that which mounts directly underneath B. The left hand route *at the upper part* was that followed by Messrs. Sella. The arrow points out the direction of the Col du Géant.

It was formerly considered that it was impossible to ascend the Aig. du Géant by what may be termed fair climbing; but on July 20, 1900, three alpinists of Vienna (MM. Maischberger, Pfannl, and Zimmer) shewed that this opinion was incorrect, by climbing the peak, by fair means, from a new direction. See *A. J.*, vol. xx, pp. 336-8.

Mont Blanc used to be ascended **viâ the Col du Geant and the Aig. du Midi** by a route which was struck out by Mr. (now Sir James) **Ramsay in 1855**; but it is circuitous, and is now seldom traversed. It is marked by a faint track on the folding Map. The cabane at the foot of the Aig. du Midi is said to be uninhabitable.

There are three passes in the vicinity of the Col du Géant which have been discovered by Mr. J. Eccles. 1. The **Col de Rochefort,** between the Aig. du Géant and the Aigs. Marbrées, descending by the Glac. de Rochefort. This was first crossed, with the guides Michel and Alphonse Payot, on July 10, 1877. "We found," says Mr. Eccles, "no difficulty in the descent over the Glac. de Rochefort, and in 3½ hours from the Col arrived at Courmayeur. I strongly recommend this Col as an alternative route to the Col du Géant."



THE AIGUILLE DU GÉANT,

SHEWING THE ROUTES OF MESSRS. SELLA AND MR. GRAHAM.

BY PERMISSION, FROM A PHOTOGRAPH BY SIGNOR VITTORIO SELLA.

2. The **Col des Flambeaux**, between the two Flambeaux nearest the Col du Géant, descending by the Glacier de Toule. Mr. Eccles informs me that he does not remember when this pass was made, and that he "never thought it worth counting as a new pass." 3. The **Col de Toule**, between the W. Flambeau and la Tour Ronde, descending by the Glacier de Toule.

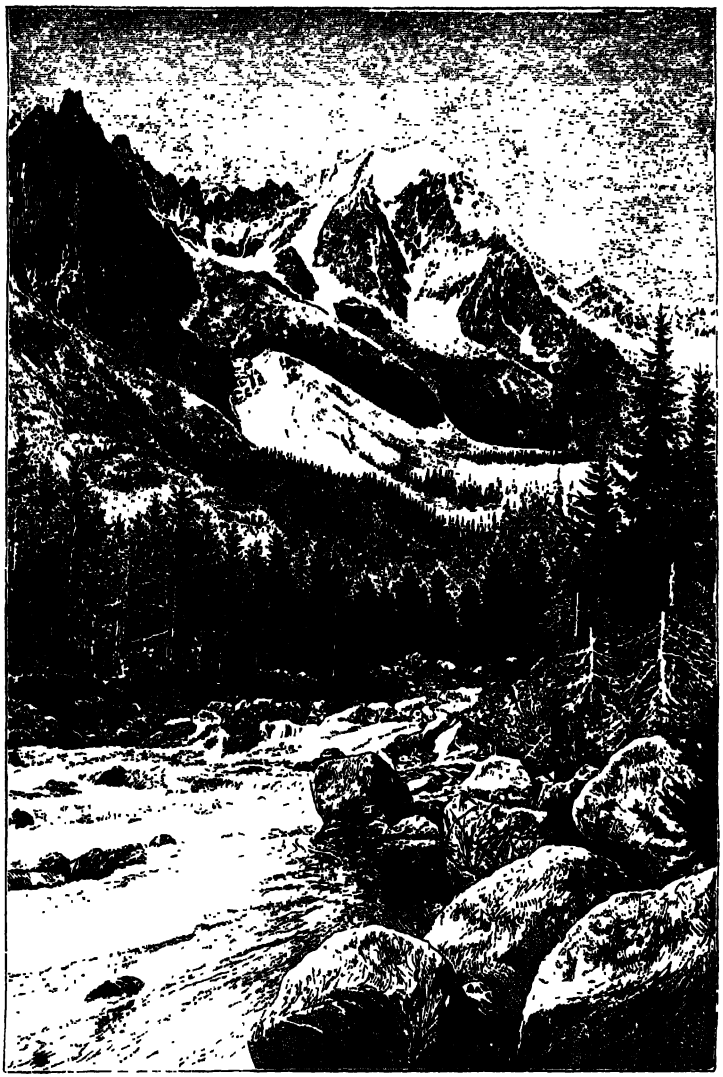
The **Ascent of Mont Blanc by the Brenva Glacier** is the most direct of all the routes up the mountain on the Italian side, but it is seldom taken, on account of its steepness and difficulty. The track of the first ascent by this route is given on the folding Map.

On July 15, 1865, "Messrs. G. S. Mathews, A. W. Moore, Frank and Horace Walker, with Melchior and Jakob Anderegg, left their bivouac on the left bank of the Glac. de Brenva, 5 hrs. from Courmayeur, at 2.45 a.m., and crossing the upper ice-fall of the glacier reached the base of a buttress which comes down at right-angles to the main mass of Mont Blanc at 5.30. Climbing the side of this buttress, they got, in 2 hrs., on to the very sharp ice *arête* forming its crest, and followed it for 1½ hrs. until it merged in steep slopes of broken névé, which they ascended for 3 hrs. more. Then, bearing to the right, they reached the Corridor at 1.20, the top of Mont Blanc at 3.10, and Chamouni, by the usual route, at 10.30 p.m. Total actual walking, 17½ hrs. It is proposed to call the pass thus made **Col de Brenva**." *Alpine Journal*, vol. ii, p. 132.

The Ascent of the Grandes Jorasses, 13,799 ft., 4206 mètres (**Cr. T. 70 frs.**). Having seen from a photograph taken near the top of Mont Blanc that the summit of the Grandes Jorasses was accessible on the Italian side, I went up Mont Saxe to trace a route over the lower part of the mountain; and on June 24, 1865, started from Courmayeur at 1.35 a.m., with Michel Croz, Christian Almer, and Franz Biener, and ascended the Val Ferret nearly as far as the village of Neiron. After passing through forest, succeeded by some highly-glaciated rocks, we made for the middle of the Glacier des Grandes Jorasses; and, traversing an island of rock (*rognon*) in its midst,[1] ascended the ice for some distance farther, towards the N.W., and then turned due N., towards the summit; and mounted sometimes by crevassed glacier, and sometimes by rocks on its left. The summit of the more western of the two highest points was reached at 1 p.m. by the *arête* of a ridge descending towards Courmayeur. We returned to Courmayeur at 8.45 p.m. In descending

"At first we followed the little ridge shewn upon the accompanying engraving, leading from our summit towards the spectator, and then took to the head of the corridor of glacier on its left, which in the view is left perfectly white. The slopes were steep and covered with new-fallen snow, flour-like and evil to tread upon. On the ascent we had reviled it, and had made our staircase with much caution, knowing full well that the disturbance of its base would bring down all that was above. In descending, the bolder spirits counselled trusting to luck and a glissade; the cautious ones advocated avoiding the slopes and crossing to the rocks on their farther side. The advice of the latter prevailed, and we had half-traversed the snow, to gain the ridge, when the crust slipped and we went along with it. 'Halt!' broke from all four, unanimously. The axe-heads flew round as we started on this involuntary glissade. It was useless, they slid over the underlying ice fruitlessly. 'Halt!' thundered Croz, as he dashed his weapon in again with superhuman

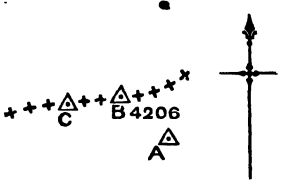
[1] On the Italian Govt. Map confusion has been produced here and elsewhere by changing the nomenclature in common use. The Glac. des Grandes Jorasses as a name has disappeared, and the portion of it to the West of the *rognon* is called G. di Pianpansière, and that on the East G. di Pra Sec.



THE GRANDES JORASSES, FROM THE ITALIAN VAL FERRET.

energy. No halt could be made, and we slid down slowly, but with accelerating motion, driving up waves of snow in front, with streams of the nasty stuff hissing all around. Luckily, the slope eased off at one place, the leading men cleverly jumped aside out of the moving snow, we others followed, and the young avalanche which we had started, continuing to pour down, fell into a yawning crevasse, and shewed us where our grave would have been if we had remained in its company five seconds longer. The whole affair did not occupy half-a-minute. It was the solitary incident of a long day, and at nightfall we re-entered the excellent house kept by the courteous Bertolini, well satisfied that we had not met with more incidents of a similar description."[1] *Scrambles amongst the Alps*, chap. xvi.

The Grandes Jorasses has three summits, which are marked A, B, C upon the annexed diagram. To B, Capt. Mieulet assigns the height 4206 mètres (13,799 ft.). The other two summits are marked by him with red triangles, but no heights are given to them. It seems probable that he regarded both lower than the one that he measured. C was the summit we ascended.



The point A lies to E.S.E. of B, and cannot be seen from the Montanvert and Mer de Glace. This is the true summit of the mountain, and is well seen from the Italian Val Ferret, near Entrèves. On the Ital. Govt. Map A is marked 4205 mètres, B 4196 mètres, and C 4066 mètres.[2] Mieulet drew his frontier line in the manner shewn in my diagram, and *excluded* the highest point of the Grandes Jorasses. On the Italian Map the frontier line is carried *through* the highest point.

Winter Ascent of the Grandes Jorasses.—Mons. Hector of Domo d'Ossola left Courmayeur on Jan. 16, 1901, reached the top of the Grandes Jorasses on the following day, and returned to his starting-point at 9 p.m. Temperature was - 12 C. at the *cabane*, and - 25 C. on the summit.

Courmayeur to Orsières (or Champey) by the Col Ferret.—There are two passes called Ferret, which are marked upon the folding Map No. 1 and No. 2. No. 1, 8176 feet, is called on the Ital. Govt. Map **Pas de Grapillon or Little Ferret**, and upon the Siegfried (Swiss) Map **le Chantonet**. No. 2, 8320 feet, is named **Col de Ferret** on the Ital. Map, **Col Ferret** on the Siegfried Map, and **Col du Gd. Ferret** on the Barbey-Imfeld Map. To reach the summit of either will take about 4½ hs. from Courmayeur. From the top of No. 1 one can descend either to the hamlet **la Folly**, or by another path to **le Clou**. From

[1] On Aug. 7, 1893, a similar incident occurred on the same spot, with unfortunate results. See *Alpine Journal*, vol. xvi, pp. 502-3.

[2] As the difference in elevation of A B is slight (according to the Ital. Map, only 9 mètres), B conceals the basin of the Mer de Glace from A. Notwithstanding my invasion of their territory with two Swiss and one French guide, I was received by the guides of Courmayeur, upon my return, with great cordiality. Two days afterwards, five of them (headed by Julien Grange) set out, at my recommendation, to learn the way to the summit while the track was still fresh. The point A was ascended on June 29-30, 1868, by Mr. Horace Walker, with Julien Grange, M. Anderegg, and J. Jaun.

A *cabane* has been erected on the *rognon*, about 5 hs. from Courmayeur, and excursions are frequently made to it (**Cr. T. 15 frs., one day; 20 frs., two days**).

the top of No. 2 the path leads past the châlets of **la Peulaz** into the Valley of the Drance, and crosses that stream by a bridge 1½ kils. *above* the Châlets de Ferret. No. 2 is the route to be preferred, as food can be obtained at the **Châlets de Ferret,** 5565 feet, RESTAURANT FERRET (10 beds); but on the other route food cannot be obtained between Courmayeur and Praz de Fort, except at the CHÂLET-CANTINE DES JORASSES, which is a few minutes below the village Neyron.

A good char road leads up the Italian Val Ferret *viâ* the villages of Entrèves, Neyron, Praz Sec, la Vachey, and Cruetta, to a spot about 20 min. short of the châlets of Pré de Bar, 6759 feet. The path for *the* Col Ferret turns to the right at these châlets, and mounts to some dirty cow-sheds called Trémaille. Soon after passing them, it bears round to the left, and continues to rise in a generally northerly direction to the **Summit of the Pass,** 8320 feet, where there is a fine view of the Grand Combin and Mont Vélan.

TIMES BY THE COL FERRET (COL DE FERRET, OR COL DU CD. FERRET) FROM COURMAYEUR TO ORSIÈRES.

	h.	min.
Courmayeur to Chalet-Cantine des Jorasses, *viâ* Entrèves .	1	10
Chalet-Cantine des Jorasses to Pré de Bar . . .	1	55
Pré de Bar to Summit of Col Ferret	1	15
Summit of Col Ferret to Châlets of Ferret, *viâ* la Peulaz .	1	35
Châlets de Ferret to Praz de Fort	1	30
Praz de Fort to Orsières		45

[At Cruetta the Doire is crossed for the Cols de Triolet and Talèfre. A hut (**Cabane de Triolet**), 8477 feet, has been erected by the Turin Sec. of the Ital. Alpine Club on the left bank of the Glac. de Triolet at the foot of Mont Rouge, for the use of persons crossing those passes, and excursions are made to it from Courmayeur (**Cr. T. 15 frs., one day; 20 frs., two days**).

The Châlets of Pré de Bar (ascending from Courmayeur, 3 hs. 5 min; descending 2½ hs.) are used as a starting-point for the **Ascent of Mont Dolent,** 12,566 feet (**Cr. T. 40 frs.**), a peak which occupies a commanding position at the junction of several ridges. This induced Mr. Adams-Reilly and myself to ascend it on July 9, 1864, for the purposes of his map. Leaving Pré de Bar at 4.15 a.m., we went nearly to the top of Col. Ferret No. 1, and thence up the left bank of the Glac. du Mont Dolent. The upper part of this is a nearly level plateau. The *bergschrund* at the foot of the peak was crossed at 9.20. and the summit gained at 11 a.m. The route is marked on the folding Map.

"This was a miniature ascent. It contained a little of everything. First we went up to the Col Ferret No. 1, and had a little grind over shaly banks; then there was a little walk over grass; then a little tramp over a moraine (which, strange to say, gave a pleasant path); then a little zigzagging over the snow-covered glacier of Mont Dolent. Then there was a little bergschrund: then a little wall of snow,—which we mounted by the side of a little buttress; and when we struck the ridge descending S.E. from the summit, we found a little *arête* of snow leading to the highest point. The summit itself was little,—very small indeed; it was the loveliest little cone of snow that was ever piled up on mountain-top; so soft, so pure; it seemed a crime to defile it; it was a miniature Jungfrau, a toy summit, you could cover it with the hand." *Scrambles amongst the Alps,* chap. xi.

Between Courmayeur and the Cols Ferret there are a number of interesting views as one passes successively the Glacs. de Rochefort, des Grandes Jorasses, Freboutzie, Triolet and Mont Dolent, and they are equally good upon the other side, while descending the Swiss Val

Ferret; but in each case one is too much under *the peaks* to appreciate them. A fine view of the Mont Dolent and Tour Noire can be obtained by mounting the slopes, for a thousand feet or so, on the east of the châlets of Ferret; and, lower down the valley, by diverging from the road for a few hundred feet, admirable glimpses can be obtained of the glaciers at this end of the Chain.

There is a char road (generally good, though sometimes rough) down the Swiss Val Ferret, which leads in 2¼ hs. from the châlets de Ferret to Orsières through la Folly, Praz de Fort (HOTEL SALEINAZ, opened in 1899), and Som la Proz. The times *ascending* will be about these.

	h.	min.
Orsières to Som la Proz		20
Som la Proz to Ville d'Issert		23
Ville d'Issert to Praz de Fort		22
Praz de Fort to Praillon	1	
Praillon to l'Amône		20
l'Amône to la Folly		15
la Folly to Châlets of Ferret		25
Châlets de Ferret to Pré de Bar	2	50

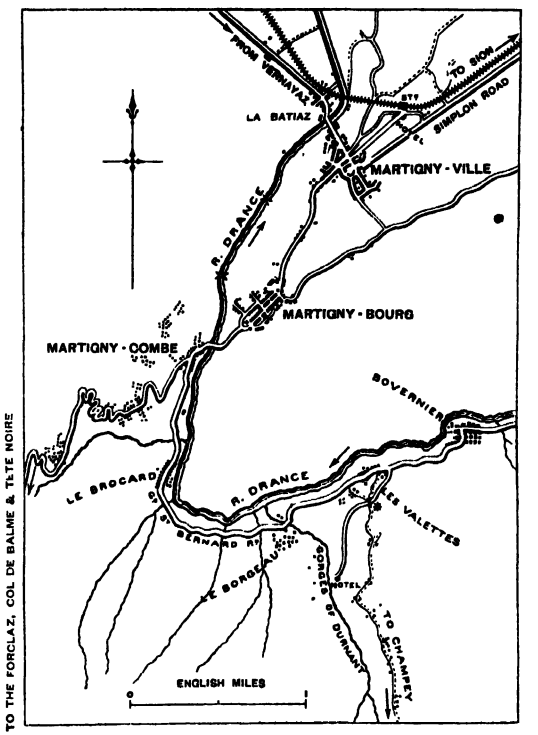
[From Praz de Fort there is a path to the **Cabane de Saleinoz,** 8845 feet, at the foot of the Saleinoz Glac. The following little ascents (and various others) are made from this place. The **Portalet,** 10,991 ft.; **Pointe des Plines,** 10,056 ft.; **Grande Fourche,** 11,867 ft.; **Darrei,** 11,605 ft.; **Pointe de Planereuse,** 10,335 ft. (on the S. side of the Glac. de Saleinoz). An excursion can be made hence *across country* to the **Cabane d'Orny,** 8832 ft., in the Combe d'Orny, at the foot of the glacier of the same name. This is another *cabane* which is in much favour with the members of the Swiss Alpine Club. It can be reached by paths either from Som la Proz, or from Champey. Numerous little excursions can be made from it in the basins of the Glacs. d'Orny and du Trient, and in the Vallée d'Arpette. The Cabane was visited by 401 persons in 1896.]

Orsières, 2920 feet; Pop. 2185; HOTEL DES ALPES; RESTAURANT DE COL FERRET. Guides, Bisselx François, Copt Joseph, Crettex Adrienne, Crettex Etienne, Crettex Maurice, Crettex Onésime, Joris Alfred, Joris Maurice. For the glacier routes to this place from the Valley of Chamonix see Chap. XII. Orsières is on the Great St. Bernard Road. It is not a sweet place. The odours of Orsières must be smelt to be appreciated. Courrier to Martigny (22 kils.) twice a day, fare 2 frs. 70 cts.

Orsières to Chamonix by the Gt. St. Bernard Road and the Col de la Forclaz.—The route passes through the villages of Sembrancher (2362 feet), Bovernier (2037 feet), and le Brocard (1755 feet). Walking time from Orsières to le Brocard is about 3 hours. At the last-named place the St. Bernard Road is quitted. A cross-road leads thence to the Forclaz route, and strikes it some distance above Martigny-Combe. On arrival there turn to the left, up the main road to the Col de la Forclaz. In the middle of the day, in summer, this is a notoriously warm bit; although the road is, to some extent, in shade. The view looking back up the Rhone Valley is a great sight. At a number of places, a pedestrian can save time by cutting the zigzags. On the summit of **Col de la Forclaz,** 4997 feet, HOTEL AND PENSION DES-COMBES; HOTEL-PENSION DE LA FOUGÈRE. Thence in a short half-hour one can get to the bottom of the Valley of Trient, and turn either *right* for the Tête Noire, or (somewhat sooner) *left* for the

Col de Balme, and by either way get to Chamonix on foot within 5 hours. See pp. 108-110.

[**Orsières to Martigny.**—At le Brocard, 1755 ft., if bound for Martigny, continue along the St. Bernard Road. **Martigny,** 1539 ft.; GRAND HOTEL DU MONT BLANC; HOTEL CLERC; HOTEL DE L'AIGLE; HOTEL NATIONAL (all close to one another in Martigny-Ville, 5 min. from Railway Stn.); HOTEL DU GRAND



PLAN OF MARTIGNY, ETC.

ST. BERNARD (at the Railway Stn.); HOTEL-PENSION RESTAURANT DE LA GARE; is made up of Martigny-Ville, Martigny-Bourg, Martigny-Combe, and la Batiaz. Total pop. 4731. Trains up the Rhone Valley to Sion, Sierre, Visp and Brieg, and in the contrary direction to Vernayaz, St. Maurice, Lausanne, Geneva, etc.]

Orsières to Chamonix viâ Champey.—Champey (Champex), 1465 mètres, 4807 feet. HOTEL-PENSION DU LAC; PENSION DANIEL CRETTEZ; HOTEL-PENSION EMILE CRETTEZ; HOTEL-PENSION BISELX; HOTEL-PENSION DU GLACIER. The Hotels are on the north-east side of a Lake, close to the water, which is exquisitely clear. The Lake is about ½ kil. across (Boating, Fishing, and Bathing), and is surrounded by forest coming down to the water's edge. The beauty of the spot

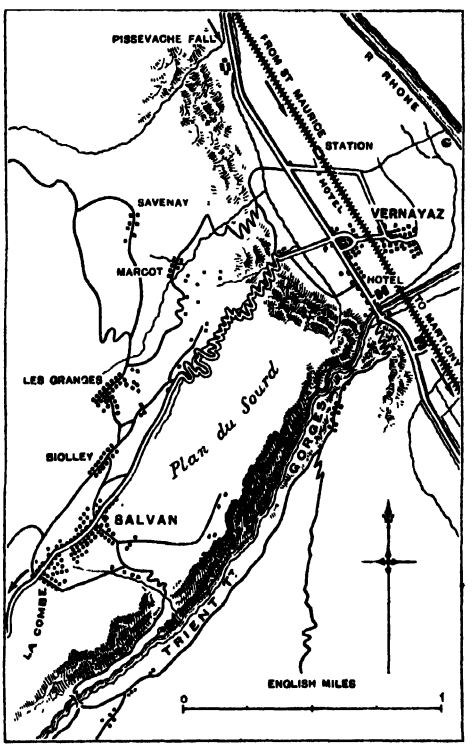
attracts increasing numbers. Many of the excursions which are made from the *Cabane* d'Orny can be made more advantageously from Champey. There is a char-road from Orsières to Champey which takes a little more than 2 hours, ascending. By 'cutting' the road, a pedestrian can *descend* from Champey to Orsières in less than 40 minutes.

There are several **ways from the Lake of Champey to Chamonix. 1. By the Village of Champey to les Valettes** on the St. Bernard Road, thence to le Brocard, and after that by the Forclaz. From Champey to les Valettes there is a mule-path, at first through forest, and then along undulating mountain-side. After les Valettes the way is down the St. Bernard Road. Time Champey to les Valettes about 2½ hours. Les Valettes to le Brocard 20 minutes. Ascending from les Valettes to Champey takes about 2 hs. 40 min.

2. By the Fenêtre d'Arpette.—From the Lake of Champey go up the Val d'Arpette, past the chalets of that name, to the head of the valley; and then incline to the right, to a gap (the *fenêtre*), 2683 mètres, 8803 feet, which is a little to the N. of the Pointe des Ecandies. On the other side, the course lies along the right bank of the Glacier du Trient. The tracks and paths here are rather rough until one is beyond and below the end of this glacier. Then make for the railway over which ice is transported to the Forclaz, follow the line, and strike off it, down to Gillot (Trient) at any convenient place. From the Lake of Champey to the Chalets of Arpette takes 45 min. The valley is pleasant and picturesque, with beautifully clear water. From Chalets d'Arpette to the summit takes about 3 hours, and from the summit to the Grand Hotel at Trient rather less than 3 hours. The Fenêtre d'Arpette is not mentioned in the Chamonix *Tarif des Courses*, and many Chamoniards are unacquainted with it, although it is well-known to the Guides of Orsières. In the middle of the season there is little or no snow on this pass.

The time has come to leave Chamonix—you leave it with regret, but go you must! and the question is, How to get away? If you came by Annemasse, *return by Salvan*. Start early; for, after the 3¼ hs. walk to Châtelard *viâ* Argentière and the Col des Montets, it is 3½ hs. or so more, through Finhaut (Fins Hauts), Triquent, and Salvan to Vernayaz in the Rhone Valley (**Cx. T., 49-52**), where you will take train,—and there is much to be seen. One kil. after Châtelard, 3681 ft., the road commences to rise steeply, and speedily gets high above the level of the Tête Noire Road, which is on the other side of the stream, here called the Eau Noire. After rising to 4387 ft., the road descends on **Finhaut**, or **Finshauts**, 4088 ft.; pop. 401; shops, post and tel.; HOTEL DE FINSHAUTS. Just before arriving at Finhaut there is a fine view of the Glac. du Trient. From Finhaut to Triquent the road descends (at one part steep zigzags, where a pedestrian can gain considerably on a carriage). **Triquent**, 3353 feet. On the N. side of this village there are the **Gorges of the Triège**, a small stream which falls into the Trient. Admission 1 fr. Ten minutes beyond this you come to **Medetta**, 3389 ft.; and a little farther on to **Marecotte**. The road now descends on **Salvan**, 3035 ft.; pop. 1829. Several Hotels. Between Châtelard—Salvan the road is open to improvement, and the traveller will sometimes consider it prudent to descend from his carriage, and walk, even if he should not be invited to do so by his *voiturier*. But from Salvan to Vernayaz it is unexceptionable. In a quarter of an hour it commences a steep

descent into the Valley of the Rhone, and becomes one of the most delightful roads to be found anywhere;—winding to and fro amongst rocks, shaded by Walnuts and Chestnuts, Beech, Birch and Firs, crossing and recrossing sparkling brooks. Read Javelle's *Légendes* in *Souvenirs d'un Alpiniste* under the Chestnuts, and then saunter down the 49 zigzags to Vernayaz, 1509 ft.; turn to the right, at the high-road, for the Gorges of Trient; GRAND HOTEL DES GORGES DU TRIENT & HOTEL VICTORIA; and, reposing in the cool shade of the cliffs, learn (from his *Impressions de Voyage*) why Dumas went fishing



PLAN OF SALVAN, VERNAYAZ, ETC.

for trout at midnight with the lad who was bullied by his mistress, and how he supped upon the *bifteck* of Bear at Martigny; and then take train at Vernayaz-Salvan, and watch *the* Lake glittering in afternoon light as you pass the massive towers of Chillon and flit along the vine-clad slopes of sunny Vaud; catch glimpses of the snow-clad peaks through distant vistas in the mountains of Faucigny,—never-forgotten, undying souvenirs of le Grand Mont Blanc.

APPENDIX.

A.—List of Villages, Hamlets, etc., in the Valley of Chamonix.[1]

Argentière.—One of the principal Villages in the Valley; near the end of the Glacier of the same name; on the Road to the Col de Balme and the Tête Noire.

Barats, les.—A group of houses ½ kil. from Chamonix, on the way to the Pierre Pointue.

Biolay.—Part of the Village of Chamonix, on the left bank of the Arve.

Bourgeat.—On the high road to le Fayet; 5¾ kils. S.W. of Chamonix.

Bossons, les.—A Hamlet near the foot of the Glacier des Bossons; nearly 3 kils. S.W. of Chamonix.

Chables, les.—On the high-road to Argentière; 2¼ kils. N.N.E. of Chamonix. The road crosses from the right to the left bank of the Arve at les Chables.

Chauzalet [les Chosalets; les Chazalets].—On the high-road to Argentière, on the left bank of the Arve; near the foot of the Glacier d'Argentière; 7 kils. from Chamonix.

Côte, la.—Chalets at the foot of the Montagne de la Côte; 4 kils. S.W. by S. of Chamonix.

Crey [le Cret].—Houses about half-way between Chamonix and les Houches, on the S. side of the high-road.

Favrants, les [les Faverands].—Chalets on the path to les Bossons, 1¾ kils. S.W. by S. of Chamonix.

Frasse, la.—Chalets on the path to the Montanvert, rather more than a kil. E.N.E. of Chamonix.

Frasserands, les.—About 1 kil. N. of Argentière; near the high-road to the Col des Montets.

Gaillands.—On the high-road to le Fayet, 2 kils. from Chamonix. The 'sham picturesque' is at Gaillands. See page 97.

Gaudenay, les [les Godenets].—On the path to the sources of the Arveyron, half-way between Praz d'en Haut and les Bois; 2½ kils. N.E. of Chamonix.

Glière.—Some houses near les Tines, on the Chamonix side.

Grassonnet [Grasonet; Grassonnets; Grassonnay].—Close to the high-road to Argentière; 6½ kils. N.E. by N. of Chamonix.

Griaz, la.—Houses at the junction of the road from les Houches with the high-road to Chamonix.

Houches, les [les Ouches].—One of the largest villages in the Valley; 6½ kils. S.W. by W. of Chamonix.

Iles, les.—On the high-road to Argentière, 6 kils. N.E. by N. of Chamonix.

Joux, la.—On the right bank of the Arve, 5½ kils. N.E. by N. of Chamonix.

[1] Some of the names in this List are not to be found upon any existing Map. It embraces nearly all the places in the Valley of Chamonix that are mentioned in this volume; but it is not exhaustive, as almost every group of houses in the Valley has its own distinctive name. The distances are reckoned from Chamonix Church, as the crow flies.

Lavancher.—A Hamlet on the path to the Chapeau, 4½ kils. N.E. by N. of Chamonix.

Lieret.—Part of the Village of Chamonix, on the left bank of the Arve. The Grand Hotel Couttet is in Lieret.

Liotraz.—A Hamlet on the high-road to Argentière, on the right bank of the Arve, opposite to Chauzalet.

Merlet.—On the right bank of the Arve, 4 kils. S.W. by W. of Chamonix.

Molaz, la [la Molà; Mollaz].—On the Planpraz route to the Brévent; ½ kil. from Chamonix.

Mont, le [sur le Mont].—Chalets on the lower part of the Montagne de la Côte; 3¾ kils. S.W. by S. of Chamonix.

Montroc [Mont Roc; Mont Roch].—On the right bank of the Arve; 1½ kils. N.N.E. of Argentière, near Village of le Tour.

Montquart [Montcuard].—On the high-road to le Fayet, 3½ kils. S.W. ½ W. of Chamonix.

Mossoux, les [les Mossous; les Mossons].—Three-quarters of a kil. from Chamonix, on the Bel-Achat route to the Brévent.

Mouilles, les [Mouilles].—On the route to the Montanvert; ¼ kil. E.N.E. of Chamonix.

Nants, les.—Some houses a little off the road to Argentière; 1⅛ kils. N.N.E. of Chamonix; nearly opposite the junction of the Arveyron with the Arve.

Pècles, les.—On the high-road to le Fayet; 1⅛ kils. from Chamonix.

Pélerins, les.—On the path to les Bossons, between les Praz d'en Bas and les Favrants; 1¾ kils. S.W. ½ S. of Chamonix.

Planes, les [Plan, les Planes].—A little off the high-road to Argentière; ¾ kil. E. by N. of Chamonix; underneath Planpraz.

Planaz, les [Planard].—Houses on the route to the Montanvert, 1½ kils. E.N.E. of Chamonix.

Praz d'en bas, les.—Between the Hamlets of les Bossons and les Pélerins; 2½ kils. S.W. of Chamonix.

Praz-Conduit, le [les Praz-Conduits].—The first group of houses outside Chamonix on the path to the Pierre Pointue.

Praz d'en haut, les.—Commonly called Praz. On the high-road to Argentière, about 2½ kils. N.E. by N. of Chamonix.

Rebats, les.—Three-quarters of a kil. W.S.W. of Chamonix, a little off the high-road to le Fayet.

Rives.—Near to and above the Hamlet of les Bossons.

Rosières, les [la Rosière].—There are two groups of chalets called Rosière, or les Rosières, one near Praz d'en haut, and the other above Chauzalet.

Sauberant.—This name is applied to the vicinity of the English church at Chamonix.

Songenaz.—Close to Praz d'en bas.

Taconnaz.—Near the foot of the Glacier of the same name.

Tines, les.—On the high-road to Argentière; 4 kils. N.E. by N. of Chamonix.

Trabets, les.—A short distance W. of les Houches; near the Pont Ste. Marie.

Tsours, les [les Tissours].—On the path to the Pierre Pointue, 1¼ kils. S.S.W. of Chamonix.

Tour, le.—A Village near the end of the Glacier du Tour: on the way to the Col de Balme; N.E. by N. of Argentière.

Vers le Nant [Vernant].—On the S. side of, and a little off the high-road to le Fayet; 4 kils. S.W. of Chamonix.

B.—THE CHAMONIX 'TARIF DES COURSES.'[1]

	Frs.	Cts.
1. To the **Glacier des Bossons**, either returning the same way or by the Cascades du Dard and des Pélerins	6	..
2. To the **Cascades du Dard and des Pélerins**	5	..
3. To the **Source of the Arveyron**	5	..
4. Extra for any of these excursions added to another in the course of the same day	4	..
5. To the **Montanvert**, returning the same way	6	..
6. To the **Montanvert** and visit to the **Mer de Glace**, returning the same way	7	..
7. To the **Croix de Flégère**, returning the same way . . .	7	..
8. To **Planpraz**	7	..
9. To **Planpraz**, returning by the **Croix de Flégère**, or *vice-versa* .	9	
10. To the **Brévent** *viâ* **Planpraz**	10	..
11. To the **Brévent** *viâ* the **Croix de Flégère**, and descending by **Planpraz**, or *vice-versa*	12	..
12. To the **Montanvert**, across the **Mer de Glace** to the **Chapeau**, and to the **Croix de Flégère**, or *vice-versa*	12	..
13. Excursion No. 12, including the **Ascent of the Brévent** . .	16	..
14. Ascent of the **Aiguille de la Floria**, *viâ* **la Flégère** . . .	20	..
15. Ascent of the **Aiguille de la Glière**, do.	15	..
16. To the **Montanvert** or the **Flégère**, and to the **Glacier des Bossons**, or the **Cascades**, in one day	10	..
17. To the **Plan des Aiguilles**	9	..
18. To the **Plan des Aiguilles**, returning either *viâ* the **Montanvert** or by **la Pierre à l'Echelle**	12	..
19. To the **Pierre à l'Echelle** and the **Montanvert** by the **Plan des Aiguilles**, or *vice-versa*	15	..
20. To the **Pierre Pointue**	8	..
21. To the **Pierre à l'Echelle**	9	..
22. Visit to the **Glacier des Bossons** joined to excursion to the **Pierre Pointue**, in one day	11	..
23. To the **Jardin**, returning, if wished, by the **Chapeau** . .	14	..
24. The same, sleeping the night before at the **Montanvert** . .	16	..
25. To the foot of the *séracs* of the **Col du Géant**	13	..
26. To the '**Moulin**' of the **Mer de Glace**, returning *viâ* **Chapeau** .	10	..
To the **Tacul**, returning *viâ* **Chapeau**	12	..
27. To the **Montanvert** and across the **Mer de Glace**, whether returning the same way or not	9	..
28. To the **Plan des Aiguilles** and **Pierre Pointue**, or *vice-versa* .	10	..

[1] It is to be understood that the prices mentioned are for each Guide taken, that is to say per Guide.

The numbers attached to the excursions correspond with the numbers quoted throughout this Volume.

		Frs.	Cts.
29.	To the **Montanvert**, and to the **Flégère** or **Planpraz**, or *vice-versa*	10	..
30.	To the **Chapeau**, and to the **Flégère** or **Planpraz**, or *vice-versa*	10	..
31.	To the village of **Argentière**, and visit to the **Glacier**, or to **Trélechamp**	6	..
32.	To the Mer de Glace of the **Glacier d'Argentière**	8	..
33.	To the bottom of the **Glacier d'Argentière**, in one day	12	..
34.	The same, in two days	18	..
35.	To the **Col de Balme** and back	9	..
36.	The same, returning by the **Tête Noire**, or *vice-versa*, in one day	10	..
37.	The same, in two days	12	..
38.	The same, descending on **Barberine**, and visit to the **Cascades of Barberine and Bérard**, in one day	10	..
39.	The same, in two days	12	..
40.	Ascent of the **Buet**, *viâ* **la Pierre à Bérard**, in one day	15	..
41.	The same, with choice of return by **Villy** and the **Brévent**	20	..
42.	**Ascent of the Buet**, descending on **Sixt**, in one day	15	..
43.	The same, in two days	20	..
44.	Return of Guide to Chamonix, extra	8	..
45.	Ascent of the **Buet**, descending to **Martigny**, return of Guide included (two or three days)	26	..
46.	Each additional day	6	..
47.	To **Martigny**, either by the **Col de Balme** or by the **Tête Noire**, return of Guide included	12	..
48.	The same, and visit to the **Cascade of Bérard** or of **Barberine**, each extra	1	..
49.	To **Vernayaz** *viâ* **Fins Hauts** and **Salvan**, return of Guide included	12	..
50.	The same, going on to **Martigny**	14	..
51.	The same in two days, if arriving at **Martigny** or **Vernayaz** before mid-day, return of Guide included	15	..
52.	The same, if arriving at **Vernayaz** or **Martigny** after mid-day	18	..
53.	To the **Cascade of Bérard**, or that of **Barberine**	6	..
54.	Visit to the two Cascades	7	..
55.	To the **Tête Noire**, *viâ* **les Montets**, and back	8	..
56.	The same, in two days	12	..
60.	By the **Col de Balme**, descending on the **Tête Noire**, to go to **Vernayaz**, *viâ* **Fins Hauts** and **Salvan**	15	..
61.	The same, in two days, arriving before mid-day at **Vernayaz**	18	..
62.	The same, in two days, arriving after mid-day	23	..
63.	To **Sixt**, *viâ* the **Brévent** and the **Col d'Anterne**, or that of **Léchaud**, return of Guide included	18	..
64.	The same, sleeping at **Planpraz**, **Villy**, or **Bel Achat**	22	..
65.	The same, *viâ* **Servoz**	18	..
66.	The same. *viâ* **le Dérochoir** or **Platey**, return of Guide included, in one day	18	..
67.	The same, sleeping at **Servoz** or at **Chède**	20	..
68.	To **Sixt** by the **Col de Tenneverges**, sleeping at **Barberine**, return of Guide included	25	..
70.	To the **Pavillon de Bellevue**, the **Col de Voza**, or **Prarion**	9	..

		Frs.	Cts.
71.	The same, returning by **St. Gervais** and **Servoz**, or by the **Col de la Forclaz**, in one day	10	..
72.	The same, in two days	12	..
73.	**Ascent of Mont Joli**, *viâ* **St. Gervais** or **Contamines**, in two days, return of Guide included	15	..
74.	The same, in three days	18	..
75.	To **Courmayeur**, *viâ* the **Pavillon de Bellevue** (or by **St. Gervais**), and by the **Cols du Bonhomme, des Fours**, and **de la Seigne**, in two days	20	..
76.	The same, in three days	24	..
77.	Return of Guide, extra	16	..
78.	From **Courmayeur** by the **Col Ferret** to **Martigny**	10	..
79.	Return of Guide from **Martigny** to **Chamonix**	6	..
80.	To **Contamines** by the **Col du Tricot**	15	..
82.	To **Vernayaz**, *viâ* the **Tête Noire**, including return, in one day	14	..
83.	The same, in two days	18	..
84.	To the **Chapeau**	6	..
85.	The same, uniting visit to the **Croix de Flégère**	10	.
89.	Ascent of the **Brévent**, *viâ* **Bel Achat**	10	..
93.	To **Lognan**, from **Argentière**	6	..
94.	The same, up to the edge of the Glacier	8	..
95.	The same, including crossing the Glacier, or to within sight of the bottom of the Glacier, starting from **Argentière**	10	..
96.	The same excursion, if made from **Chamonix**, extra	3	..
97.	To **Sixt**, *viâ* **Bel Achat**	18	..
99.	To the top of the **Montagne de la Côte**	15	..
100.	To the **Col de Balme**, by the **Montanvert** and the **Mer de Glace**, or *viâ* the **Flégère**, in one day, returning to Chamonix same evening	13	..
101.	The same, in two days	15	..
107.	To the **Gorges of Diosaz**	6	..
108.	To the **'jonction' des Glaciers des Bossons and de Taconnaz**	12	..
109.	To the **Col d'Anterne** and back	14	..

"Courses Extraordinaires."

1.	The **Ascent of Mont Blanc**, either *viâ* the **Grands Mulets** or by the **Aiguille du Goûter**	100	..
2.	If one does not upon this ascent get farther than the **Grands Mulets**, in one day	20	..
3.	The same, in two days	30	..
4.	If one gets only to the **Grand Plateau**	50	..
	do. do. **Dôme du Goûter**	60	..
5.	If one gets only to the top of **'the Corridor,'** or the top of the **Bosses du Dromadaire**	70	..
6.	Higher than these points, or if one gets to the top of the **Mur de la Côte**, the full tarif price (100 francs) may be exacted ('est exigible')	..	..

		Frs.	Cts.
7.	If the **Ascent of Mont Blanc** occupies more than three days, each Guide must be paid extra, per day	10	..
8.	Ascent of the **Aiguille du Goûter** *viâ* the **Pavillon de Bellevue**	40	..
9.	Ascent of the **Aiguille du Goûter** *viâ* the **Grands Mulets** .	40	..
10.	To the **Grand Plateau,** or the **Ascent of the Dôme du Goûter,** either *viâ* the **Grands Mulets** or *viâ* the **Cabane de l'Aiguille du Goûter,** including stoppage ('avec séjour') at one or other of these places, or *vice-versa*[1]	50	..
11.	La même sans séjour[2]	40	..
13.	To **Courmayeur** *viâ* the **Grands Mulets,** the **Aiguille du Midi,** and the **Col du Géant**[2]	70	..
14.	To **Courmayeur** by the **Col du Géant,** or to **Orsières** by the **Cols du Chardonnet, du Triolet,** for each Col[3] . . .	50	..
15.	To the **Col du Géant** and back to **Chamonix**	40	..
16.	To the **Col du Chardonnet** and back to **Chamonix** . . .	30	..
17.	The same, returning by the **Col du Tour** *viâ* the **Fenêtre de Saleinoz (Salène),** or *vice-versa*	40	..
18.	To the **Col de Triolet** and back to **Chamonix**	40	..
19.	To **Orsières** by the **Col d'Argentière,** and to the **Allée Blanche** by the **Col de Miage,** each excursion	60	..
20.	To the **Col d'Argentière** and back to **Chamonix** . . .	30	..
21.	To the **Col de Miage** and back to **Chamonix**	40	..
22.	To the **Col Pierre Joseph** and back	40	..
23.	To **Orsières** by the **Col Pierre Joseph**[4]	40	..
24.	By the **Col du Tour** to the **Val Ferret**	40	..
25.	By the **Col du Mont Tondu** to **les Motets**	30	..
26.	By the **Col de Trélatête** to **Courmayeur**	60	..
27.	By the **Col de la Brenva** to **Courmayeur**	80	..
28.	To the **Col des Grands Montets** and back to **Chamonix** by the **Glacier du Nant Blanc**	20	..
29.	The same excursion, in two days	25	..
30.	The same excursion, returning by the **Glacier d'Argentière** .	30	..
31.	A diminution of 10 francs will be made upon each 'grand Col' to tourists who, after having made excursions to one or more of the above-named 'grands Cols,' wish to retain their Guide for a journey	..	..
32.	The Ascent of the **Aiguille Verte**	100	..
33.	The Ascent of the **Aiguilles Rouges**	20	..
34.	The Ascent of the **Aiguille d'Argentière**	65	..
35.	The Ascent of the **Aiguille du Chardonnet**	65	..
36.	The Ascent of the **Aiguille du Midi**	60	..
37.	The Ascent of the **Aiguille du Tour**	50	..
38.	The Ascent of the **Aiguille de Bionnassay**	70	..
39.	The Ascent of the **Grandes Jorasses**	80	..
40.	The Ascent of the **Tour Ronde**	65	..

[1] Enquiry should be made respecting the meaning of 'avec séjour.'

[2] This requires explanation.

[3] The Col de Triolet (not *du* Triolet) leads to Courmayeur, and not to Orsières.

[4] The Col Pierre Joseph does not lead to Orsières.

		Frs.	Cts.
41.	For all Glacier excursions in the Chain of Mont Blanc	10	..
42.	By the **Col des Hirondelles to Courmayeur**	60	..
43.	Ascent of the **Aiguille de Blaitière**	80	..
44.	Ascent of the **Aiguilles des Charmoz**	80	..
45.	Ascent of the **Aiguille du Géant**	100	..
46.	Ascent of the **Aiguille du Moine**	35	..
47.	Ascent of the **Aiguille du Tacul**	35	..
48.	Ascent of the **Aiguille du Dru, pointe Charlet**	130	..
49.	Ascent of the **Aiguille du Dru, pointe Est**	90	..
50.	Excursion to the **Col des Courtes,** side of the **Jardin**	30	..

Tarif des Porteurs.

For 'Chaises à porteur' the tarif is the same as for Guides.
The load of each Porter must not exceed 25 kilos.

1.	To the **Jardin**	10	..
2.	do. sleeping at the **Montanvert**	12	..
3.	Ascent of the **Buet,** in one day	10	..
4.	do. do. sleeping at **la Pierre à Bérard** or at **Villy**	12	..

Courses Extraordinaires.

The weight of the load of each Porter upon 'courses extraordinaires' must not exceed 15 kilos., and upon the **Ascent of Mont Blanc** it must not exceed 10 kilos. above the **Grand Plateau.**

1.	To the **Grands Mulets,** in one day	12	..
2.	do. do. in two days	15	..
3.	To the **Grand Plateau** *viâ* the **Grands Mulets,** or to the **Dôme du Goûter** *viâ* the **Aiguille du Goûter**	30	..
4.	To the top of the **Corridor,** or the **Bosses du Dromadaire**	35	..
5.	To the summit of **Mont Blanc**	50	..
6.	To the **Cabane of the Aiguille du Goûter,** *viâ* the **Col de Voza**	15	..
7.	The same, in two days	20	..
8.	To the top of the **Col du Géant** and back to **Chamonix**	20	..
9.	Ascent of the **Aiguille Verte**	50	..
10.	Over the **Col du Géant** to **Courmayeur,** return included	30	..
11.	Over the **Col du Tour**	25	..
12.	To the top of the **Col du Tour,** and back to **Chamonix**	15	..
13.	For the other 'grands Cols,' when the tariff for Guides is 50 francs and upwards, each Porter	30	..
14.	Or, when the tariff for Guides is less than 50 francs, each Porter	25	..
	Exceptions.		
15.	The **Col du Mont Tondu**	20	..
16.	The **Col des Grands Montets**	15	..

TARIF DES MULETS.

	Frs.	Cts.
The 'Tarif des Guides' is applicable to Mules in the case of all ordinary excursions, with the exception of the following ones.		
1. To the **Montanvert**, descending to the Valley and remounting to the **Chapeau**, or *vice-versa*	9	..
2. Excursion to the **Jardin**, the Mule remaining all day at the **Montanvert**	9	..
3. If it stops for the night at the **Montanvert**	12	..
4. Excursion to the **Buet**, in one day, the Mule stopping at **la Pierre à Bérard**	10	..
5. The same excursion, if two days are occupied	12	..
6. On the ascent of **Mont Blanc**, if the Mule stops at the **Châlet de la Para**	6	..
7. On the same, if it goes to the **Pierre Pointue**	8	..
8. To the **Pierre Pointue**, the Mule awaiting the return of excursionists who go to the **Grands Mulets**	10	..
9. To the **Brévent**, the Mule descending to the Valley and remounting to **Planpraz**, or *vice-versa*	12	..
10. The same, with the addition of the **Flégère**	14	..

C.—THE COURMAYEUR 'TARIF DES COURSES.'[1]

	Guide. Francs.	Porter. Francs.
The **Ascent of Mont Blanc** *viâ* the **Col du Géant**, descending to **Chamonix**	Must be the subject of special arrangement.	
The same, *viâ* the **Col de la Brenva**, descending to **Chamonix**	do.	do.
The **Ascent of Mont Blanc**, *viâ* the **Glacier de Miage**, the **Dôme du Goûter** and the **Bosses du Dromadaire**, descending to **Chamonix**	100	60
Ascent of **Mont Maudit**	70	40
do. of the **Grandes Jorasses**, in two days	70	40
do. do. (**lower point**)	Must be the subject of special arrangement.	
do. of the **Petites Jorasses**	40	25
do. of the **Aiguille de Rochefort**	50	30
do. of the **Aiguille de Leschaux**	50	30
do. of the **Aiguille de l'Eboulement**	50	30
do. of the **Aiguille de Talèfre**	50	30
do. of the **Aiguille de Triolet**	50	30
do. of **Mont Dolent**	40	25
do. of **Mont Gruetta**	20	12
do. of the **Aiguille du Géant**	70	50
do. of the **Aiguilles Marbrées**	20	15
do. of the **Aig. du Midi**, descending to **Chamonix**	70	40
do. of the **Tour Ronde**	40	20
do. of the **Aiguille Noire de Peuteret**	70	50
do. of the **Aiguille Blanche de Peuteret**	Must be the subject of special arrangement.	
do. of the **Aiguille Grise**	35	20
do. of **Mont du Brouillard**	35	25
do. of the **Tête Carrée**	40	25
do. of the **Aiguille de Bionnassay**, *viâ* the **Glacier de Miage**	70	40
The same, descending to **Chamonix**	80	45
Ascent of the **Aiguille de Trélatête**	50	30
do. of the **Aiguille du Glacier**	40	25
do. of **Mont Tondu**	25	18
do. of **Mont Saxe**	6	6
do. of **Mont Chetif**	6	6
do. of the **Crammont**	8	6
do. of **Mont Favre**	15	10

[1] Enquiry should be made in all cases whether the *Tarif* price includes the return to Courmayeur of Guides and Porters.

	Guide. Francs.	Porter. Francs.
By the **Col du Géant** to **Chamonix**, in one day . . .	40	25
The same, in two days	50	30
By the **Col de Miage** to **Chamonix**	50	30
do. **Col de la Brenva** to **Chamonix**	80	50
do. **Col de la Tour Ronde** to **Chamonix** . . .	50	30
do. **Col de l'Aiguille du Midi** do.	50	30
do. **Col des Jorasses** do.	60	40
do. **Col des Hirondelles** do.	50	30
do. **Col de Pierre Joseph** do.	50	30
do. **Col de Talèfre** do.	50	30
do. **Col de Triolet** do.	45	30
do. **Col de Trélatête** to **Contamines**	50	30
do. **Col du Mont Tondu** do.	25	18
do. **Col de la Seigne** to **Motets**	12	10
do. **Col de la Seigne, Chapieux,** and **Col du Bonhomme** to **Chamonix,** in three days[1]	30	30
do. **Col de la Seigne** to **Contamines,** in one day[1] .	16	16
do. do. do. in two days[1] .	20	20
do. **Col Ferret** to **Orsières**	16	16
do. **Col du Petit Ferret** to **Orsières**	16	16
To the **Col Ferret,** returning to **Courmayeur,** one day .	8	8
do. **Col de la Seigne** do. do. .	8	8
do. **Lac de Combal** do. do. .	6	6
do. **Cantine de la Visaille,** returning to **Courmayeur** .	5	5
do. **Pavillon Mont Fréty,** returning to **Courmayeur** .	6	6
do. **Cabane on the Col du Géant,** returning to **Courmayeur,** in one day	15	10
The same, in two days	20	15
To the **Cabane des Grandes Jorasses,** returning to **Courmayeur,** in one day	15	10
The same, in two days	20	15
To the **Cabane de Triolet,** returning to **Courmayeur,** in one day	15	10
The same, in two days	20	15
To the **Cabane du Dôme,** returning to **Courmayeur,** in one day	20	15
The same, in two days	25	20

[1] The *Tarif* is the same either *viâ* Chapieux or *viâ* the Col des Fours.

D.—Mountains and Heights in and around the Range of Mont Blanc.

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Aiguillette, l' . .	2317	7602	On the range of the Brévent; W. of Chamonix.
Aiguillette, l' . .	2201	7221	Sometimes called les Posettes. N. by W. of the Village of le Tour.
Argentière, Aiguille d'	3901	12,799	Between the Glacs. d'Argentière and de Saleinoz; E.N.E. of Chamonix.
Arpette, Clochers d' .	2822	9259	N. side of Vallée d'Arpette; W. of Lac de Champex.
Béranger, Aiguille de .	3431	11,257	Head of Glacier de la Frasse. On Mieulet's map it is called la Bérangère.
Bérard, Aiguille de .	2612	8570	Between Mont Buet and the Aiguilles Rouges.
Bionnassay, Aiguille de	4061	13,324	Head of the two Glaciers de Miage; nearly due W. of the summit of Mont Blanc.
Blaitière, Aiguille de .	3533	11,591	E.S.E. of Chamonix; nearly due S. of the Montanvert.
Blanc, Mont . . .	4810	15,781	The observations made in 1844 by MM. Martins and Bravais to determine the height of Mont Blanc were calculated by M. Delcros, and the result (4810 mètres) was published in the *Annuaire Météorologique de la France*, 1851, vol. iii, p. 215. The same observations were also calculated by Prof. E. Plantamour, Director of the Observatory at Geneva, with a slightly different result (4811·7 mètres). See *Tables Meteorological & Physical*, published by the Smithsonian Institution, Washington. M. Martins states in his book *Spitzbery au Sahara*, Paris, 1866, that the *mean* of the trigonometrical measures of Mont Blanc taken *down to his time* was 4809·6 mètres.
	4810	15,781	This is the elevation assigned to Mont Blanc upon Sheet xxii of the Carte Dufour, published in 1861.

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Blanc, Mont . . .	4810	15,781	The same elevation is assigned to Mont Blanc upon the map by Capt. Mieulet, published at Paris in 1865.
	4810	15,781	The same elevation is adopted on the Official Map of France. scale $\frac{1}{80000}$, revised in 1888.
	4811	15,785	Mons. X. Imfeld, upon the plan of the summit of Mont Blanc executed by him in 1891 for Mons. G. Eiffel, gives 4811 mètres as the elevation.
	4807	15,771	Upon Sheet 27 of the Carta d'Italia, scale $\frac{1}{50000}$, corrected to 1894, the height assigned to Mt. Blanc is 4807 mètres. MM. Vallot have also found the height to be 4807 mètres.
Bochard, Aiguille à .	2672	8767	N.E. of the Montanvert.
Brévent, le . . .	2525	8284	W.N.W. of Chamonix; between the Valley of Chamonix, and the Valley of the Dioza.
Brouillard, Mont du .	...	...	This name is applied by Capt. Mieulet to the *ridge* on the W. of the Glac. du Brouillard (Val Véni).
Buet, Mont . .	3109	10,200	N. by W. of Chamonix; N.W. by W. of the Village of Argentière. Commonly called *the* Buet.
Capucin, le (Mont Maudit)	3831	12,568	E. by N. of Mont Maudit; near the head of the Glacier du Géant.
Capucin, le (Tacul) .	3043	9984	E. of Pic du Tacul.
Cardinal, le . . .	3638	11,936	W.S.W. of Aig. Verte.
Catogne . . .	2600	8530	N. by W. of Lac de Champex.
Chardonnet, Aiguille du	3823	12,543	E. of Lognan; N.W. $\frac{1}{2}$ W. of the Aiguille d'Argentière.
Charmoz, Aiguilles des	3442	11,293	E.S.E. of Chamonix; S. of the Montanvert.
Charmoz, Petits	2866	9403	S. by W. of the Montanvert.
Châtelet, Aiguille du .	2324	7625	Between the Glaciers du Fresnay & du Brouillard; N. of the lower end of the Italian Glacier de Miage.
Châtelet, le . . .	2542	8340	S. side of the Combe d'Orny; W.S.W. of Lac de Champex.
Chetif, Mont . .	2343	7687	W.N.W. of Courmayeur; S. side of Val Véni.
Côte, Montagne de la .	2588	8491	The buttress or ridge dividing the Glacier des Bossons from the Glacier de Taconnaz. On the Official Map of France. scale $\frac{1}{80000}$, the top of this ridge has been christened Mont Corbeau!

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Courmayeur, Mont Blanc de	4756	15,604	S.S.E. of the summit of Mont Blanc; at the head of the Glaciers du Brouillard and du Fresnay. The height 4756 mètres is after Capt. Mieulet. On the Carta d'Italia, scale $\frac{1}{50000}$, the height is said to be 4709 mètres (15,450 feet). According to Mons. H. Vallot, the height is 15,578 feet.
Courtes, les . . .	3855	12,648	Part of the ridge between the Glaciers d'Argentière and de Talèfre; S. of the Aiguille du Chardonnet.
Crammont, Tête de .	2737	8980	Due S. of the Col du Géant; W. of Pré St. Didier. Commonly called *the* Crammont.
Dames Anglaises, les .	3604	11,824	Between the Aig. de Pouterot and the Aig. Blanche de Pouteret. Pinnacles on the ridge between the Glaciers de la Brenva and du Fresnay.
Darrei, le . . .	3537	11,605	E. of Glacier d'Argentière; S. side of Glacier de Saleinoz.
Darrey, le . . .	3881 ?	12,733?	On the ridge between the Glacier d'Argentière and the Glaciers of Saleinoz and Laneuvaz; between the Aig. d'Argentière and la Tour Noire.
Dolent, Mont . .	3830	12,566	At the junction of the ridges separating the Glaciers du Mont Dolent, d'Argentière, and de Laneuvaz.
Droites, les . . .	4030	13,222	Northern side of the Glacier de Talèfre; E. ½ S. of the Aiguille Verte.
Dru, Aiguille du . .	3754	12,317	Eastern side of the Mer de Glace; E. of the Montanvert. The elevation given is the determination of Mons. Vallot. According to Capt. Mieulet the height of the Dru is 3815 mètres.
Eboulement, Aiguille de l'	3608	11,838	Between the Glaciers de Leschaux and de Triolet; S. of Aiguille de Talèfre.
Ecandies, Pointe des .	2886	9469	At the head of the Vallée d'Arpette; eastern side of Glac. du Trient.
Enclave, Tête d' . .	2901	9518	N.E. of Col des Fours; N.W. by W. of les Motets.
Evêque, Aiguille de l' .	3260	10,696	Northern side of the Italian Val Ferret; E.S.E. of the Grandes Jorasses.

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Fer, Montagne de	1692	5551	The name given to the Southern end of the range of the Brévent; overlooking Servoz.
Flambeaux, les	3566	11,700	W. of Col du Géant; head of Glacier de Toule.
Floria, Aiguille de la	2888	9475	N. of Chamonix; Northern end of the range of the Brévent.
Fourche, Grande	3617	11,867	Head of the Glaciers du Tour, de Saleinoz, and du Trient; E.N.E. of Aiguille du Chardonnet.
Fours, Pointe des	2719	8921	S. of Col des Fours.
Freuge, Mont	2114	6936	In the Val Montjoie; S.W. by S. of Contamines.
Géant, Aiguille du	4013		N.E. of Col du Géant; N. by W. of Courmayeur.
Glacier, Aiguille du	3816		N. of Col de la Seigne; head of Glacier d'Estelette. Sometimes called Aiguille des Glaciers.
Goûter, Aiguille du	3845	12,615	S.W. of the Grands Mulets; N.W. of summit of Mont Blanc.
Goûter, Dôme du	4331	14,210	S. of Village of les Bossons; N.W. of summit of Mont Blanc.
Grapillon			This name is applied by Capt. Miculet to a peak on the ridge dividing the Italian Glacier du Mont-Dolent (Pré du Bar) from the Swiss Glacier du Mont Dolent; and it is given on the Carta d'Italia to the Mont Dolent. I have not heard it used on the spot.
Grépon, Aiguille de	3182	11,424	S. of the Montanvert.
Gruetta, Mont	3685	12,090	S. side of Glacier de Triolet; N.W. of châlets of Gruetta.
Joly (Joli), Mont	2527	8291	Western side of Val Montjoie; W. of Village of Contamines.
Jorasses, Grandes	4206	13,799	Head of Glacier de Leschaux; S.E. by S. of the Montanvert.
Jorasses, Petites	3682	12,080	N.E. of Grandes Jorasses; S.E. of Montanvert.
Jours, Montagne des	2929	9610	A buttress of the Aiguille du Goûter, descending towards the Village of les Houches.
Jovet, Mont	2472	8110	S. of Village of Contamines; E.N.E. of Châlet à la Balme.
Leschaux, Aiguille de	3780	12,402	Between the Glaciers de Leschaux and de Triolet.
Luis, Grande	...		Between the Aiguille d'Argentière and le Darreï.

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Mallet, Mont . .	3988	13,084	Head of the Glac. du Mont Mallet, and of the Glac. des Périades.
Marbrées, Aiguilles .	3514	11,529	N.E. of Col du Géant.
Maudit, Mont . .	4471	14,669	Head of Glac. de la Brenva; N. by E. of the summit of Mont Blanc.
Miage, Dôme de .	3688	12,100	Head of Glacier de Trélatête; N.W. of Aiguille de Trélatête.
Midi, Aiguille du . .	3843	12,608	S.S.E. of Chamonix; on the Eastern side of the Glacier des Bossons.
Moine, Aiguille du .	3418	11,214	E. side of the Mer de Glace; W. of the Jardin.
Mulets, Grands . .	3050	10,007	S. by W. of Chamonix; between the Glaciers des Bossons and de Taconnaz. The height quoted is that of the old *cabane*, near the top of the rocks.
Noire, Aiguille la .	3427	11,244	Eastern side of Glacier du Géant; N. by E. of Col du Géant.
Orny, Pointe d' . .	3278	10,755	Head of Glacier d'Orny; S.W. by W. of Lac de Champex.
Peuteret, Aiguille Blanche de	4108	13,478	S.E. of the summit of Mont Blanc; between the Glaciers de la Brenva and du Fresnay.
Peuteret, Aiguille de (or Aiguille Noire de)	3777	12,392	S.E. of the Aiguille Blanche de Peuteret; between the Glaciers de la Brenva and du Fresnay. On the Carta d'Italia Péteret is used, and this was the spelling commonly used until the publication of Capt. Miculet's map.
Pic Sans Nom . .	?	?	Between the Aiguille du Dru and the Aiguille Verte.
Pissoir, le . . .	3349	10,988	W. side of Glacier du Trient; N. of the Aiguille du Tour.
Plan, Aiguille du . .	3673	12,051	S.E. of Chamonix; S. by W. of the Montanvert.
Planereuse, Pointe de .	3156	10,355	Southern side of Glacier de Saleinoz.
Plines, Pointe de . .	3065	10,056	Northern side of Glacier de Saleinoz.
Pointe Percée, la . .	2752	9029	W.N.W. of Sallanches.
Portalet . . .	3350	10,991	Southern side of Glacier d'Orny; S.W. of Lac de Champex.
Pourrie, Aiguille . .	2562	8406	N. by W. of Chamonix; on the range of the Brévent.
Prarion	1969	6460	About midway between the Villages of St. Gervais and les Houches.
Rochefort, Aiguille de	4003	13,133	At the head of the Glacier de Rochefort; nearly due N. of Courmayeur.

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Rognes, les . . .	2695	8842	South of the village les Houches, between the Gl. de Griaz and the French Gl. de Bionnassay.
Ronde, la Tour . .	3775	12,385	Head of Glacier du Géant; N.W. of Courmayeur.
Ronde, Pointe . .	2655	8711	S.E. of Col de la Forclaz.
Rouges, Aiguilles (Belvédère)	2966?	9731?	N. of Chamonix; W. of Village of Argentière.
Rouge, Mont . .	3257	10,686	Between the Italian Glacier du Mont Dolent (Pré du Bar) and the Glacier de Triolet.
Rouge, Mont . .	2942	9652	S.S.E. of Aiguille de Peuteret (Péteret).
Rousselette, Mont .	2391	7845	Western side of Val Montjoie; S.W. by S. of the Village of Contamines. Sometimes called Aiguille de Roselette.
Salenton, Aiguille de .	2681	8806	Between Mont Buet and the Aiguilles Rouges.
Sarsadorège, Aiguille de	2831	9288	S.E. of the Aiguille de Trélatête; a buttress of that mountain.
Saussure, Aiguille de .	3845	12,615	S.E. of the Grands Mulets; on the Eastern side of the upper Glacier des Bossons.
Saxe, Mont . . .	2358	7736	S. side of the Italian Val Ferret; N.N.E. of Courmayeur.
Scie, Aiguille de la .	3694	12,120	Head of Glacier de l'Allée Blanche; about midway between the Aig. de Trélatête and Aig. du Glacier.
Seigne, Montagne de la	3137	10,392	S. side of the Col de la Seigne: between the Val du Glacier and the Allée Blanche.
Suc, Mont . . .	2608	8557	W. of the Lac de Combal. A buttress of the Aig. de Trélatête.
Tacul, Mont Blanc du .	4249	13,941	N.E. by N. of Mont Maudit; S. of the Aig. du Midi.
Tacul, Pic du . .	3438	11,280	Between the Glaciers du Géant and de Leschaux; S. of the Aiguille du Moine.
Talèfre, Aiguille de .	3745	12,287	Head of the Glaciers de Triolet and de Talèfre.
Tête Carrée . . .	3770	12,369	At the head of the Glacier de Trélatête; between the Aiguille de Trélatete and the Col de Miage.
Tête Noire . . .	1768	5801	N.E. by E. of the Village of St. Gervais: between St. Gervais and Servoz.

Name.	Height in Mètres.	Height in Feet.	Position of Summit.
Tondu, Mont . .	3196	10,486	N.W. of les Motets; S.S.E. of Village of Contamines.
Tour, Aiguille du .	3531	11,585	Between the Glaciers du Tour and du Trient; S.E. of the Col de Balme.
Tour des Courtes . .	3692	12,113	Part of the ridge between the Glaciers d'Argentière and de Talèfre; W. of Mont Dolent.
Tour Noire, la . .	3843	12,608	Head of the Glacier de Laneuvaz; S.E. of the Aiguille d'Argentière.
Trélaporte, Aiguille de	2550	8366	W. of le Couvercle; S.S.E. of the Montanvert.
Trélatête, Aiguille de .	3932	12,900	At the head of the Glaciers de Trélatête and de l'Allée Blanche;
	3904	12,809	W. side of the Italian Glacier de Miage. The Aig. de Trélatête is
	3896	12,782	sometimes called le Petit Mont Blanc.
Tricot, Mont . .	2828	9279	Between the French Glacier de Miage, and the Glacier de Bionnassay.
Triolet, Aiguille de .	3879	12,727	At the head of the Glaciers de Triolet and d'Argentière; W.S.W. of Mont Dolent.
Trux, Mont . . .	2062	6765	E. by N. of the Village of Contamines.
Varens, Aiguille de .	2188	8163	N.E. of Sallanches.
Verte, Aiguille . .	4127	13,540	Between the Glaciers de Talèfre and d'Argentière; E. of the Montanvert.
Vierge, la . . .	3222	10,571	Head of the Glacier du Géant; N.N.W. of the Col du Géant.
Vorassay, Mont . .	2295	7530	E.S.E. of the Village of Bionnay.

E.—Passes in and around the Range of MONT BLANC.

Name of Pass.	Height in Mètres.	Height in Feet.	Position of Summit.
Allée Blanche, Col de l'	c 3520	c 11,549	Between the Aigs. de Trélatête and the Aig. de la Scie. This is a variation on the Col de Trélatête.
Argentière, Col d' .	3520	11,549	Between la Tour Noire and Mont Dolent.
Arpette, Col d' . .	3040	9974	E. of the Pointe d'Orny; between the Combe d'Orny and the Vallée d'Arpette.
Arpette, Fenêtre d' .	2683	8803	N. of Pointe des Ecandies; between the Vallée d'Arpette and the Trient Glacier.
Balme, Col de . .	2202	7225	Between the Villages of le Tour and Trient.
Béranger, Col de . .	?	?	Between the Dôme de Miage and the Aig. de Béranger.
Bonhomme, Col du .	2340	7677	Alt. determined by Mons. Vallot.
Brenva, Col de la .	4301 ?	14,111 ?	Between the summit of Mont Blanc and Mont Maudit.
Brévent, Col du . .	2368	7769	Alt. determined by Mons. Vallot.
Breya, Col de la . .	2479	8133	Between the Vallée d'Arpette and the Combe d'Orny.
Chardonnet, Col du .	3346	10,978	Between the Aig. du Chardonnet and the Aig. d'Argentière.
Dolent, Col . .	3543	11,624	Between the Aig. de Triolet and Mont Dolent.
Dôme, Col du . .	4331	14,210	Over the top of the Dôme du Goûter.
Ecandies, Col des .	2743	9000	Between the Pointe d'Orny and the Pointe des Ecandies; between Champey and the Trient Glacier.
Enclave, Col d' . .	2686	8812	Between the Tête d'Enclave and Mont Tondu.
Ferret, Col de . .	2536	8320	Between the Swiss and Italian Valleys of Ferret.
Ferret, Petit . .	2492	8176	Between the Swiss and Italian Valleys of Ferret. This pass is called le Chantonet on the Siegfried Map.
Flambeaux, Col des .	?	?	Between the two Flambeaux which are nearest to the Col du Géant.
Forclaz, Col de la (Swiss)	1523	4997	N. W. of the Pointe Ronde; between Trient and Martigny.
Forclaz, Col de la (French)	1556	5105	Between the Valley of the Arve and St. Gervais; S. by W. of Servoz.
Fourche, Col de la .	?	?	N. of the Grande Fourche.
Fours, Col des . .	2710	8891	N. of the Pointe des Fours.
Géant, Col du . .	3362	11,030	Between les Flambeaux and les Aigs. Marbrées. On the Italian Map the height 3347 mètres is assigned to this Pass.

Name of Pass.	Height in Mètres.	Height in Feet.	Position of Summit.
Glacier, Col du	?	?	S.W. of the Aig. du Glacier (Aig. des Glaciers).
Grands, Col des	?	?	Head of the Glacier des Grands.
Hirondelles, Col des	3478	11,411	Between the Grandes Jorasses and the Petites Jorasses.
Infranchissable, Col dit	3377	11,080	N. of the Tête Carrée; at the head of Glac. de Trélatête.
Jorasses, Col des Grandes	?	?	W.S.W. of the Grandes Jorasses.
Leschaux, Col de	3138	11,280	Between the Aigs. de l'Eboulement and Leschaux, at the foot of the latter.
Luis, Col de la Grande	3410	11,286	Between le Darreï and the Grande Luis.
Miage, Col de	3376	11,076	S.S.W. of the Aig. de Bionnassay.
Montets, Col des	1445	4741	N. of the Village of Argentière.
Montets, Col des Grands	?	?	E. of Aig. du Bochard (Aig. du Bochard).
Neuva, Col de la	3420	11,221	Between the Tour Noire and the Grande Luis.
Orny, Col d'	3098	10,164	S. of Pointe d'Orny; between Combe d'Orny and Glac. du Trient.
Pierre Joseph, Col de	3608	11,836	Over the top of A. de l'Eboulement.
Plan, Col du	3469	11,381	Between Aigs. du Midi and du Plan.
Planereuse, Col de	3063	10,049	S.W. of Pointe de Planereuse.
Rochefort, Col de	?	?	Between the Aigs. Marbrées, and the Aig. du Géant, nearer the latter.
Saleinoz, Fenêtre de	3309	10,856	N.E. of the Grande Fourche; head of Glac. du Trient.
Seigne, Col de la	2512	8242	Head of Val de l'Allée Blanche.
Talèfre, Col de	?	?	Head of the Glaciers de Talèfre and de Triolet.
Tête Noire	1191	3918	S. of Finhaut.
Tondu, Col du Mont	?	?	N.E. of Mont Tondu.
Toule, Col de	?	?	Between les Flambeaux and la Tour Ronde.
Tour, Col du	3350	10,991	Between the Aig. du Tour and the Grande Fourche.
Tour Noire, Col de la	?	?	Between la Tour Noire and the Aig. d'Argentière.
Tour, Fenêtre du	3476	11,404	Between Aig. du Chardonnet and the Grande Fourche.
Tour Ronde, Col de la	3790	12,435	Over the top of la Tour Ronde.
Trélatête, Col de	3498 ?	11,477 ?	Head of Glac. de l'Allée Blanche, close to Aig. de Trélatête.
Tricot, Col de	2133	6998	Between Mont Vorassay and Mont Tricot.
Triolet, Col de	?	?	Head of Glac. de Triolet; W.S.W. of Aig. de Triolet.
Voza, Col de	1675	5496	Between the Villages of les Houches and Bionnassay.

F.—List of Guides of CHAMONIX.

[Those marked with an asterisk speak English.]

(Corrected to January, 1904.)

Name.	Son of	Born.	Became Guide.
Devouassoux Henri	..	Ap. 12, 1844	1867
Ravanel Ambroise (*Argentière*)	..	Aug. 21, 1844	1868
Tissay Joseph (*le Tour*)	...	Nov. 21, 1844	do.
Cachat Joseph (*Plan*)	Pierre	Mar. 23, 1846	do.
Couttet Joseph (*Songenaz*)	Julien	Mar. 28, 1846	do.
Balmat Joseph-Marie (*les Pélerins*)	...	June 28, 1844	do.
Couttet Joseph (*Glière*)	Ambroise	Dec. 26, 1846	1870
Semblanet François	...	May 27, 1846	do.
*Devouassoux Denis	...	Dec. 17, 1845	do.
Garny François-Napoléon	..	Aug. 3, 1844	do.
Ravanel Joseph-Elie	..	Feb. 21, 1845	do.
*Ravanel Edouard	...	Sept. 29, 1846	do.
Simond François (*Lavancher*)	...	Oct. 26, 1847	1871
Cachat François (*Vers le Nant*)	..	Feb. 12, 1848	do.
Couttet J.-Pierre (*les Pècles*)	...	Oct. 28, 1845	do.
Simond Gaspard	.	May 19, 1847	do.
Bellin Henri	..	Aug. 16, 1847	do.
Ravanel Jean	Pierre	May 18, 1847	do.
Lechat Marc	.	July 31, 1845	do.
Devouassoux Benoît		Feb. 21, 1849	1872
Devouassoux Albert	..	Aug. 23, 1844	do.
Comte Alfred	..	Jan. 27, 1849	do.
Carrier Jean-François		July 21, 1844	do.
Payot Alfred		Ap. 28, 1844	do.
Cachat Joseph (*Vers le Nant*)	.	Mar. 17, 1845	do.
Couttet Delphin		Jan. 18, 1849	do.
*Couttet Joseph-Anatole	.	Dec. 13, 1847	do.
Ravanel François-Xavier	.	Feb. 23, 1845	do.
*Simond Joseph (*les Mossoux*)	...	July 7, 1849	do.
*Simond Hubert	...	May 3, 1849	do.
Payot Jean-Pierre	J.-Marie	Sept. 26, 1847	do.
Ducroz Joseph (*Chanzalet*)	...	Aug. 10, 1849	do.
Lechat Joseph	..	July 31, 1845	do.
Folliguet Camille		Sept. 20, 1845	1873
Devouassoux Joseph	..	May 20, 1846	1874
Ducroz Emile	...	Jan. 12, 1847	do.

N.B.—The names of the Guides in the following Lists are not included in the Index.

Name.	Son of	Born.	Became Guide.
SIMOND Gustave	...	Jan. 11, 1851	1874
DUCROZ François-Anselme	..	Oct. 27, 1851	1875
CHARLET Albert (*Mont Rock*)	.	Sept. 7, 1850	do.
CACHAT Henri	...	June 8, 1850	do.
CACHAT Florentin	...	Dec. 7, 1850	do.
PAYOT Alphonse	Jean	Nov. 28, 1852	1876
BALMAT Michel (*les Barats*)	...	Mar. 12, 1847	do.
MUGNIER François	Jean	Aug. 14, 1853	1877
BOSSONNEY Ambroise	Jean	Aug. 7, 1852	do.
SIMOND Michel-Alfred	Xavier	July 7, 1852	do.
COUTTET Joseph	.	Jan. 29, 1851	do.
COMTE Pierre-Charles	.	Ap. 28, 1853	do.
SIMOND Séraphin	...	Sept. 29, 1853	do.
COUTTET Jean-Edouard	Julien	Feb. 13, 1852	do.
COUTTET François-Chérubin	...	Sept. 27, 1852	do
DUCREY Auguste (*les Mossoux*)	...	June 27, 1854	1875
BOSSONNEY François	Joseph	Oct. 25, 1854	do.
SIMOND Michel (*Rives*)	...	Sept. 6, 1846	do.
PAYOT Jean-Edouard (*les Bois*)		June 28, 1847	do.
SIMOND Emile (*Crey*)		Ap. 6, 1851	do.
RAVANEL Luc (*Grassonets*)		June 10, 1855	do.
DEVOUASSOUX Pierre-F. (*Argentière*)		Nov. 8, 1853	do.
MUGNIER Jean-Pierre (*le Tour*)		June 10, 1841	do.
MUGNIER Lubin (*le Tour*)		Sept. 26, 1852	do.
*COUTTET Alfred (*les Pèles*)		July 21, 1855	do.
DUCROZ Gustave (*le Tour*)		Nov. 1, 1851	1879
COUTTET Gustave (*Lavancher*)	.	Jan. 28, 1856	do.
TOURNIER Joseph (*Frasse*)		Dec. 1, 1855	do.
DESAILLOUD Benoît		Sept. 7, 1852	1880
CHARLET Alphonse (*les Mouilles*)	.	Nov. 1, 1849	do.
BOSSONNEY François (*Lieret*)		Jan. 3, 1857	do.
CHARLET Joseph (*Praz-Conduit*)	Michel	Dec. 22, 1855	do.
CARRIER Jean-Michel (*Argentière*)	.	May 31, 1845	do.
CACHAT Edouard		July 8, 1854	1881
COUTTET Eugène		July 17, 1858	do.
DUCROZ Jean-Michel (*Argentière*)	..	July 19, 1856	do.
COUTTET Ambroise (*les Pélerins*)		May 8, 1858	do.
BOSSONNEY Constantin (*les Bois*)	..	Ap. 3, 1855	do.
CLARET-TOURNIER Alphonse	Edouard	Ap. 25, 1859	1882
DEVOUASSOUX Jean-Félicien (*Argentière*)	...	Aug. 10, 1856	do.
CARRIER Henri	Emile	Ap. 10, 1859	do.
COUTTET Joseph	Pierre	May 15, 1859	do.
FARINI Joseph (*les Mouilles*)	...	Mar. 22, 1855	do.
GARNY Jean-Baptiste	..	Sept. 22, 1856	do.
COUTTET Alexandre (*Montquart*)	Michel	Ap. 5, 1859	1883

Name.	Son of	Born.	Became Guide.
FARINI Aristide	...	Dec. 29, 1859	1883
PAYOT Joseph-Aristide	...	Mar. 28, 1852	do.
COUTTET Joseph-Edouard	...	Dec. 12, 1859	do.
SAVIOZ Michel-Eugène	.	Ap. 20, 1860	1884
SIMOND Julien-Philibert	.	Aug. 26, 1857	do.
DEVOUASSOUX Jean-Pierre		Aug. 22, 1855	do.
COUTTET Aristide		Aug. 1, 1857	do.
CLARET Victor-Edouard	...	Mar. 17, 1861	do.
COUTTET Joseph	Victor	June 23, 1859	do.
CACHAT Aristide	...	Mar. 2, 1855	do.
CACHAT Armand		Nov. 25, 1860	1885
CLARET-TOURNIER Jean	Ferdinand	May 30, 1859	do.
SERMET Alexandre	..	Jan. 22, 1860	do.
TISSAY Clément		Feb. 3, 1855	do.
COUTTET François-Hercule	..	Mar. 16, 1862	do.
CLARET-TOURNIER Alfred	Joseph	Feb. 3, 1862	do.
CLARET-TOURNIER Joseph	Edouard	Aug. 10, 1862	do.
CLARET-TOURNIER Edouard	Ferdinand	Dec. 17, 1862	do.
FAVRET Ambroise	..	Aug. 25, 1858	do.
*DESAILLOUD Michel	..	Jan. 13, 1860	do.
RAVANEL Nestor (*Argentière*)		Jan. 2, 1860	do.
BURNET Jean-Joseph		Aug. 16, 1860	do.
DEVOUASSOUX Joseph-Albert (*Argentière*)	..	May 26, 1860	1886
CLARET Jean-Joseph	Jacq.-Jos.	Jan. 30, 1860	do.
DEVOUASSOUX Jean-Michel (*Argentière*)	.	June 21, 1863	do.
DEVOUASSOUX Joseph	..	June 28, 1863	do.
*PACCARD Edouard	Joseph	Ap. 19, 1861	do.
CLARET-TOURNIER Joseph-H.	Alexandre	Sept. 3, 1863	do.
TISSAY Jean-Alphonse (*Argentière*)	..	June 18, 1863	do.
DUCROZ François-Benjamin (*Argentière*)	.	Nov. 29, 1859	do.
DUCROZ Pierre-Marie (*Argentière*)	..	Dec. 26, 1859	do.
CLARET-TOURNIER Ambroise	Edouard	Sept. 23, 1862	do.
DESAILLOUD Joseph	.	Mar. 17, 1863	do.
BELLIN Octave		Oct. 23, 1862	do.
FRASSERAND François		Mar. 4, 1861	do.
TAIRRAZ Clément		Ap. 9, 1861	do.
*SCHULER Henri		June 4, 1861	1887
COMTE Alfred		Oct. 1, 1863	do.
DESAILLOUD Jean (*le Praz-Conduit*)		Dec. 23, 1859	do.
COUTTET Armand (*le Praz-Conduit*)		Sept. 12, 1863	do.
BALMAT Jean (*les Pècles*)	...	Aug. 24, 1863	do.
BALMAT Auguste (*les Bossons*)	Frédéric	Oct. 3, 1858	do.
COMTE François (*la Côte*)	...	June 1, 1858	do.
CLARET-TOURNIER Joseph	Joseph	May 7, 1864	do.
BELLIN Alphonse (*Praz*)	...	May 18, 1855	do.

Name.	Son of	Born.	Became Guide.
BALMAT Joseph (*Pont de Perrolataz*)	...	Feb. 3, 1862	1887
MUGNIER Alphonse (*les Barats*)	...	Jan. 14, 1851	do.
BALMAT Alexandre		Dec. 6, 1856	do.
MUGNIER Michel (*le Tour*)	..	Feb. 5, 1863	do.
SIMOND Camille (*les Frasserands*)	...	Dec. 25, 1863	do.
DEVOUASSOUX Pierre (*Grassonets*)	...	Mar. 27, 1864	do.
CLARET-TOURNIER Charles	Edouard	Dec. 27, 1865	1888
BOSSONNEY Alphonse (*les Tines*)	...	Dec. 14, 1861	do.
CLARET Edouard (*les Pècles*)	Jacq.-Ed.	May 25, 1865	do.
COMTE Louis	.	Sept. 25, 1861	do.
FAVRET, Lambert (*les Pècles*)		Mar. 7, 1864	do.
COUTTET Jean-Marie	.	Feb. 6, 1865	do.
CARRIER Edouard (*Bouchet*)	...	Sept. 15, 1862	do.
CACHAT Aristide (*Vaut*)	Jean	May 9, 1865	do.
TRONCHET François	. .	Mar. 18, 1863	do.
TAIRRAZ Alfred (*Praz*)	..	Sept. 15, 1860	do.
CHARLET Jean (*les Mouilles*)	..	Feb. 14, 1864	do.
BOSSONNEY Jules	...	Mar. 12, 1866	1889
SIMOND Jules (*Praz*)	Léon	Aug. 1, 1863	do.
COUTTET François-Henri	...	Mar. 8, 1864	do.
SIMOND Jules	Edouard	Oct. 28, 1865	do.
BRETON Emile (*les Mouilles*)	Joseph	July 1, 1866	do.
COUTTET Jules (*Lavancher*)	Michel	June 21, 1863	do.
SIMOND Alexandre (*les Tines*)	Joseph	Nov. 23, 1866	1890
SIMOND Edouard (*les Bois*)	Alexandre	Aug. 7, 1867	do.
COUTTET François (*Lavancher*)	François	June 23, 1867	do.
DESAILLOUD Joseph (*les Favrants*)	J.-B.	Sept. 7, 1863	do.
COMTE Ambroise (*les Favrants*)	Mich.-Aug.	Nov. 7, 1866	do.
LECHAT Joseph-Marc (*les Pélerins*)	Auguste	Mar. 2, 1866	do.
LECHAT François (*les Pélerins*)	Auguste	Nov. 24, 1867	do.
DEVOUASSOUX Michel-A. (*la Joux*)	Mich.-Mér.	Feb. 24, 1862	do.
CHARLET Edouard-Luc (*la Joux*)	Auguste	Nov. 23, 1866	do.
DEVOUASSOUX Jul.-Mér. (*Argentière*)	Florentin	July 5, 1867	do.
DUCROZ Joseph-Alphonse (*le Tour*)	Joach.	Jan. 4, 1861	do.
DUCROZ Ant.-Mod. (*le Tour*)	Zacharie	Feb. 5, 1865	do.
CARRIER Jean-Pierre (*Argentière*)	Ferdinand	Feb. 20, 1867	do.
TISSAY Michel-Louis	Jacques	June 21, 1866	1891
DUCROZ Henri (*le Mont*)	Jérémie	June 13, 1866	do.
PAYOT Jean-François (*Praz d'en bas*)	Jean-A.	Ap. 3, 1866	do.
COUTTET A. (*Songenaz*)	Julien	Mar. 8, 1866	do.
*SIMOND Joseph-Aristide (*Tissours*)	Fr.-Joseph	Aug. 17, 1859	do.
FAVRET Michel-Alphonse (*les Rebats*)	Michel-Aug.	Mar. 8, 1867	do.
SIMOND Joseph (*Lavancher*)	Mar.-Xav.	Aug. 21, 1865	do.
SIMOND M.-E. (*Mont Roch*)	Ben.	Oct. 2, 1865	do.
DEVOUASSOUX Jean-Albert (*Grassonets*)	Julien	Oct. 14, 1865	do.

Name.	Son of	Born.	Became Guide.
DUCROZ Jean-Michel (*le Tour*)	Zacharie	Dec. 2, 1866	1891
SIMOND Joseph (*le Tour*)	Romain	Oct. 4, 1868	do.
MUGNIER Lubin-Eucharist (*le Tour*)	Julien	Jan. 6, 1862	1892
SIMOND Pierre-Edouard (*le Tour*)	Jean	Aug. 21, 1867	do.
SIMOND Jules-Adolphe (*le Tour*)	Jean	Oct. 12, 1869	do.
DEVOUASSOUX Joseph-Eloi (*Grassonets*)	Jean	Aug. 22, 1867	do.
RAVANEL Gilbert-Alphonse (*Mont Roch*)	Ambroise	Dec. 31, 1869	do.
RAVANEL Jules (*Mont Roch*)	Ambroise	June 13, 1867	do.
DEVOUASSOUX Jules-François (*Argentière*)	Jérémie	Mar. 30, 1865	do.
RAVANEL Joseph-Louis (*les Iles*)	Pierre	Feb. 9, 1869	do.
DUCROZ François (*la Joux*)	Benoni	July 13, 1869	do.
CACHAT Rosset-Joseph (*les Tines*)	Tanislas	Nov. 16 1866	do.
BALMAT Pierre-François (*Sauberant*)	Jean	June 25, 1866	do.
COUTTET Auguste (*les Pècles*)	François	Jan. 9, 1869	do.
PAYOT Delphin-Antilde (*les Bossons*)	Michel	Aug. 28, 1867	do.
POT Jean (*le Mont*)	Simond	Dec. 16, 1867	do.
SIMOND Jean-Auguste (*Montquart*)	François	Feb. 21, 1869	do.
COUTTET Alfred (*Songenaz*)	Julien	Dec. 4, 1868	do.
DEVOUASSOUX Pierre-Elie (*Montquart*)	Julien	Feb. 20, 1854	1894
*SIMOND Henri	Joseph	July 31, 1868	do.
BOSSONNEY, François-Joseph (*les Pècles*)	Zacharie	Sept. 12, 1868	do.
DESAILLOUD Clément (*le Praz Conduit*)	Philippe	Sept. 27, 1868	do.
SIMOND Alphonse (*Lavancher*)	Tobie	Mar. 21, 1870	do.
DEVOUASSOUX Joseph-Maxime (*la Joux*)	Méril	Ap. 10, 1870	do.
DEVOUASSOUX Pierre-Gilbert (*Argentière*)	Florentin	Jan. 24, 1870	do.
DEVOUASSOUX Paul (*Grassonets*)	Julien	Mar. 22, 1869	do.
BALMAT Jean-Edouard (*le Mont*)	Adolphe	Sept. 23, 1870	do.
PAYOT Clément (*Granges*)	Michel	Sept. 29, 1869	do.
DUCROZ Edouard (*Vers le Nant*)	Jérémie	Aug. 6, 1870	do.
BALMAT Alexandre (*les Pècles*)	Henri	July 6, 1867	do.
RAVANEL Jean (*Praz*)	Pierre	Oct. 9, 1870	do.
TAIRRAZ Alexandre (*Praz*)	Tobie	Mar. 17, 1872	1895
CACHAT Joseph-François (*Nant*)	Jean	Feb. 2, 1867	do.
CHARLET Joseph (*le Mollard*)	Auguste	. . . 1867	do.
BRETON Jean-Adolphe (*les Mouilles*)	Joseph	Mar. 9, 1869	do.
DEVOUASSOUX Jean (*Tissours*)	...	Jan. 16, 1867	do.
CACHAT Paul (*Nant*)	Jean	Mar. 3, 1869	do.
CACHAT Clément (*Nant*)	Ferdinand	Mar. 13, 1870	do.
SIMOND Jules-François (*les Bois*)	Alexandre	Nov. 12, 1870	do.
BALMAT Alphonse (*Praz d'en bas*)	Venance	Feb. 7, 1869	do.
COUTTET François-Joseph (*les Pèlerins*)	Sidoine	Sept. 6, 1870	do.
CLARET Aristide-Joseph (*Gaudenay*)	Joseph	Feb. 27, 1867	do.
SIMOND François (*Lavancher*)	Jean	Feb. 23, 1869	do.
BURNET Felix (*Lavancher*)	...	Ap. 1, 1865	do.
CHARLET Paul (*les Tines*)	Joseph	June 27, 1872	do.

Name.	Son of	Born.	Became Guide.
Ducroz Armand (*le Tour*)	Pierre	Jan. 28, 1870	1895
Ravanel Pierre-Joseph (*les Iles*)	François	Feb. 16, 1870	do.
Devouassoux Joseph (*Argentière*)	Jérémie	Feb. 15, 1870	do.
Ravanel Jean-Michel (*les Iles*)	Pierre	Feb. 6, 1871	do.
Bellin Frédéric (*les Iles*)	Pierre	Dec. 18, 1871	do.
Ravanel Erneste (*les Iles*)	François	Sept. 27, 1872	do.
Devouassoux Albert (*Argentière*)	Josué	Sept. 4, 1872	do.
Charlet Hubert (*les Frasserand*)	Michel	Feb. 23, 1868	do.
Devouassoux Pierre-Arm. (*Argentière*)	Josué	Oct. 14, 1870	do.
Ducroz Jean (*la Joux*)	Gilbert	Sept. 16, 1872	1896
Ducroz Joseph (*le Tour*)	Jean	June 14, 1871	do
Ducroz Jean-Luc (*Praz*)	Jean	Jan. 23, 1873	do.
Mugnier Joseph-Eucariste (*le Tour*)	Clément	Sept. 12, 1873	do.
Tissay Armand-Joseph (*le Tour*)	Gaspard	July 21, 1871	do.
Folliguet Adolphe-Edouard (*Rosiere*)	Ambroise	Oct. 13, 1867	do.
Payot Edouard (*les Pècles*)	Alphonse	Jan. 7, 1871	do.
Claret-Tournier Paul (*les Bois*)	Alexandre	May 3, 1873	do.
Balmat Joseph Edouard (*les Pélerins*)	Auguste	Jan. 6, 1872	do.
Payot Auguste (*Praz d'en bas*)	Alfred	Aug. 13, 1871	do.
Simond Henri (*les Bois*)	François	Sept. 18, 1872	1897
Simond Pierre (*Argentière*)	Anselme	June 14, 1872	do.
Charlet Pierre-Camille (*les Frasserand*)	Julien	July 26, 1873	do.
Charlet Michel-Armand (*Argentière*)	Pierre	June 21, 1872	do.
Ravanel Paul-Noël (*Mont Roch*)	Pierre	Mar. 3, 1872	do.
Simond Jules-César (*Mont Roch*)	Benoît	Sept. 12, 1872	do.
Devouassoux Luc-Armand (*les Bossons*)	Auguste	Nov. 23, 1874	do.
Balmat Joseph-Edouard (*les Pélerins*)	Auguste	July 8, 1872	do.
Bornel Michel (*Vers le Nant*)	Antoine	June 9, 1871	do.
Tournier Gustave (*les Mouilles*)	Jean	Feb. 10, 1871	do.
Ravanel Pierre-Camille (*les Iles*)	Michel	Sept. 21, 1871	do.
Bozon Léon (*les Pélerins*)	Félix	Aug. 5, 1861	do.
Choupin Alexandre (*Montquart*)	François	Ap. 23, 1869	do.
Comte Edouard (*Montquart*)	Judith	Feb. 1, 1869	do.
Demarchi Joseph (*les Barats*)	Jean	July 19, 1869	do.
*Breton Paul-Joseph (*les Mouilles*)	Charlet-Mar.	Aug. 10, 1875	1898
Devouassoux Henry-Joseph	Dev.-Marie	May 13, 1872	do.
Simond Michel (*Lavancher*)	Jean	Sept. 23, 1875	do.
Couttet Adolphe (*Lavancher*)	Celestin	Mar. 13, 1874	do.
Simond Camille (*Pratz*)	Joseph	Oct. 8, 1873	do.
Balmat Gustave (*les Barats*)	Alexandre	Jan. 1, 1874	do.
Tournier Jules-Edouard (*les Mouilles*)	Jean-Marie	Jan. 6, 1874	do.
Favret Jean-Edouard (*les Pélerins*)	François	Feb. 11, 1875	1899
Desailloud Henri-Alf. (*le Praz-Conduit*)	Joseph	Oct. 3, 1874	do.
Payot Gustave-Edouard (*les Mossoux*)	Jean-Pierre	Oct. 24, 1874	do.
Devouassoux Jean-Alex. (*Chauffriaz*)	Albert	Jan. 20, 1876	do.

Name.	Son of	Born.	Became Guide.
SIMOND Michel-Joseph (*les Tines*)	Edouard	May 29, 1875	1899
PAYOT Clément (*les Mossoux*)	J.-Pierre	May 27, 1874	do.
COUTTET Emile (*Larancher*)	Celestin	Mar. 5, 1876	do.
CUPELIN François-A. (*Vers le Nant*)	Auguste	June 24, 1875	do.
TISSAY Joseph-Josime (*le Tour*)	Jacques	Sept. 5, 1876	do.
*COUTTET Joseph	Jean-Marie	Aug. 2, 1871	1900
PAYOT Gustave (*les Mossoux*)	Alphonse	Jan. 17, 1875	do.
*TAIRRAZ Paul	Zacharie	Dec. 8, 1873	do.
COUTTET Jules (*le Praz-Conduit*)	Jean	Jan. 1, 1874	do.
BALMAT Jules (*les Pélerins*)	Ambroise	Jan. 14, 1876	1901
BURNET Jules (*le Praz-Conduit*)	Joseph	Sept. 3, 1875	do.
DEVOUASSOUX François	Modeste	Ap. 13 1874	do.
BORNEL Joseph (*Crey*)	Antoine	Sept. 15, 1872	do.
BALMAT Alfred (*Pont de Perrolaz*)	Venance	Jan. 7, 1876	do.
RAVANEL Lubin	Romain	Oct. 15, 1874	do.
BELLIN Jean (*Argentière*)	Julien	Aug. 26, 1876	do.
COUTTET François	Joseph	Oct. 16, 1876	1902
COUTTET Gustave	Joseph	May 9, 1876	do.
CACHAT Gustave	Jean	May 9, 1876	do.
DEVOUASSOUX Henri	Modeste	Ap. 13, 1875	do.
RAVANEL Paul Armand	Pierre	Feb. 28, 1877	do.
DESAILLOUD Jules	Edouard	Ap. 9, 1877	do.
BALMAT Paul André	Joseph	Feb. 14, 1876	do.
BELLIN Adolphe Denis	Alexandre	Dec. 7, 1876	do.
SIMOND Paul	François	Ap. 28, 1878	1903
SIMOND Henri	Gustave	Nov. 27, 1878	do.
COUTTET Paul	Alexandre	Dec. 25, 1876	do.
CACHAT Paul	François	Jan. 12, 1878	do.
TOURNIER Léon	Clément	Feb. 27, 1877	do.
COMTE Armand	Celestin	May 1, 1868	do.
BALMAT François	Alexandre	Mar. 20, 1878	do.
SIMOND Henri Sidoine	Michel	May 6. 1878	do.

G.—List of Guides at COURMAYEUR.

Berthod Alexis.
Bertholier Laurent.
Brocherel Alexis.
Croux Fabien.
Croux Hugues.
Croux Joseph.
Croux Laurent.
Fenoillet Alexis.
Gadin Joseph.
Glarey Samuel.
Mussillon Louis.
Ollier César.
Petigax Joseph.
Proment Alexis.
Proment David.
Proment Julien.
Proment Laurent (the elder).
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Revel Pierre.
Rey Henri.
Savoye Cyprien.
Truchet Laurent.

Revel Laurent,
GUIDE-CHEF (LA GUIDA-CAPO).

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Mètres.		Feet.	Mètres.		Feet.	Mètres.		Feet.
1	=	3·28	50	=	164·04	100	=	328·09
2		6·56	51		167·33	200		656·18
3		9·84	52		170·61	300		984·27
4		13·12	53		173·89	400		1312·36
5		16·40	54		177·17	500		1640·45
6		19·69	55		180·45	600		1968·54
7		22·97	56		183·73	700		2296·63
8		26·25	57		187·01	800		2624·72
9		29·53	58		190·29	900		2952·81
			59		193·57			
10		32·81				1000		3280·90
11		36·09	60		196·85	1100		3608·99
12		39·37	61		200·13	1200		3937·08
13		42·65	62		203·42	1300		4265·17
14		45·93	63		206·70	1400		4593·26
15		49·21	64		209·98	1500		4921·35
16		52·49	65		213·26	1600		5249·44
17		55·78	66		216·54	1700		5577·53
18		59·06	67		219·82	1800		5905·62
19		62·34	68		223·10	1900		6233·71
			69		226·38			
20		65·62				2000		6561·80
21		68·90	70		229·66	2100		6889·89
22		72·18	71		232·94	2200		7217·98
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29		95·15	78		255·91	2900		9514·61
			79		259·19			
30		98·43				3000		9842·70
31		101·71	80		262·47	3100		10.170·79
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38		124·67	87		285·44	3800		12,467·42
39		127·96	88		288·72	3900		12.795·51
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40		131·24	90		295·28	4000		13,123·60
41		134·52	91		298·56	4100		13,451·69
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48		157·48	98		321·53	4800		15,748·32
49		160·76	99		324·81	4900		16.076·41

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FEET.	MÈTRES.	FEET.	MÈTRES.	FEET.	MÈTRES.
1 =	0·30	3300 =	1005·82	8300 =	2529·79
2	0·61	3400	1036·30	8400	2560·27
3	0·91	3500	1066·78	8500	2590·75
4	1·22	3600	1097·26	8600	2621·23
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6	1·82	3800	1158·22	8800	2682·19
7	2·13	3900	1188·70	8900	2712·67
8	2·43	4000	1219·18	9000	2743·15
9	2·74	4100	1249·66	9100	2773·63
10	3·04	4200	1280·14	9200	2804·11
20	6·09	4300	1310·62	9300	2834·59
30	9·14	4400	1341·10	9400	2865·07
40	12·19	4500	1371·58	9500	2895·55
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80	24·38	4900	1493·49	9900	3017·47
90	27·43	5000	1523·97	10,000	3047·94
100	30·48	5100	1554·45	10,100	3078·42
200	60·96	5200	1584·93	10,200	3108·90
300	91·44	5300	1615·41	10,300	3139·38
400	121·91	5400	1645·89	10,400	3169·86
500	152·40	5500	1676·37	10,500	3200·34
600	182·88	5600	1706·85	10,600	3230·82
700	213·36	5700	1737·33	10,700	3261·30
800	243·84	5800	1767·81	10,800	3291·78
900	274·31	5900	1798·29	10,900	3322·26
1000	304·79	6000	1828·77	11,000	3352·74
1100	335·27	6100	1859·25	11,100	3383·22
1200	365·76	6200	1889·73	11,200	3413·70
1300	396·23	6300	1920·21	11,300	3444·18
1100	426·71	6400	1950·68	11,400	3474·66
1500	457·19	6500	1981·16	11,500	3505·14
1600	487·67	6600	2011·64	11,600	3535·62
1700	518·15	6700	2042·12	11,700	3566·10
1800	548·63	6800	2072·60	11,800	3596·57
1900	579·11	6900	2103·08	11,900	3627·05
2000	609·59	7000	2133·56	12,000	3657·53
2100	640·07	7100	2164·04	12,100	3688·01
2200	670·55	7200	2194·52	12,200	3718·49
2300	701·03	7300	2225·00	12,300	3748·97
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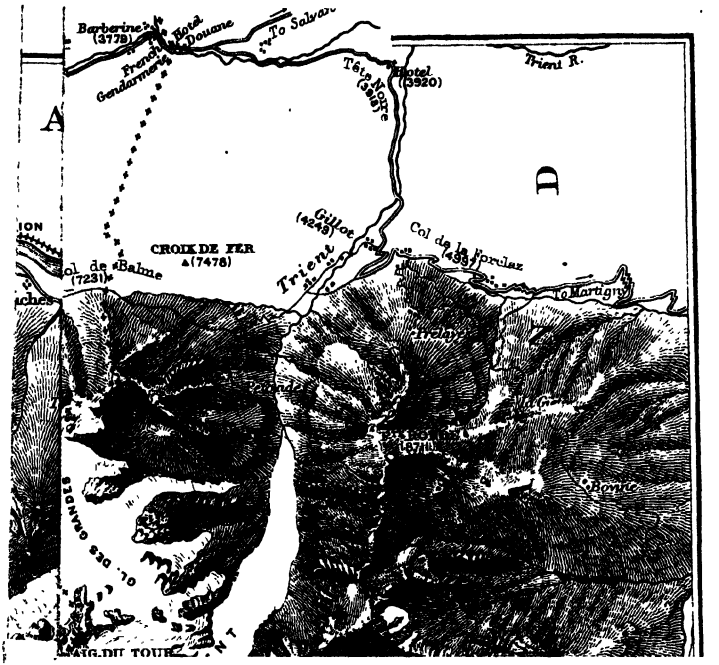
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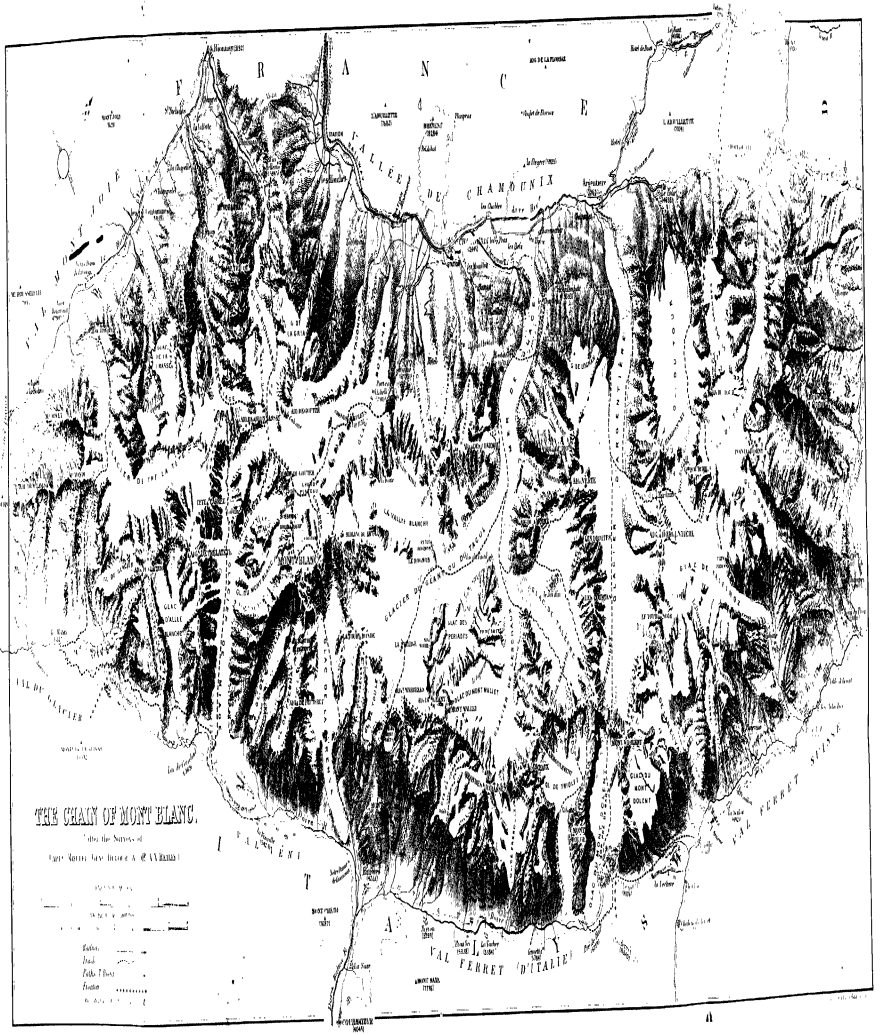
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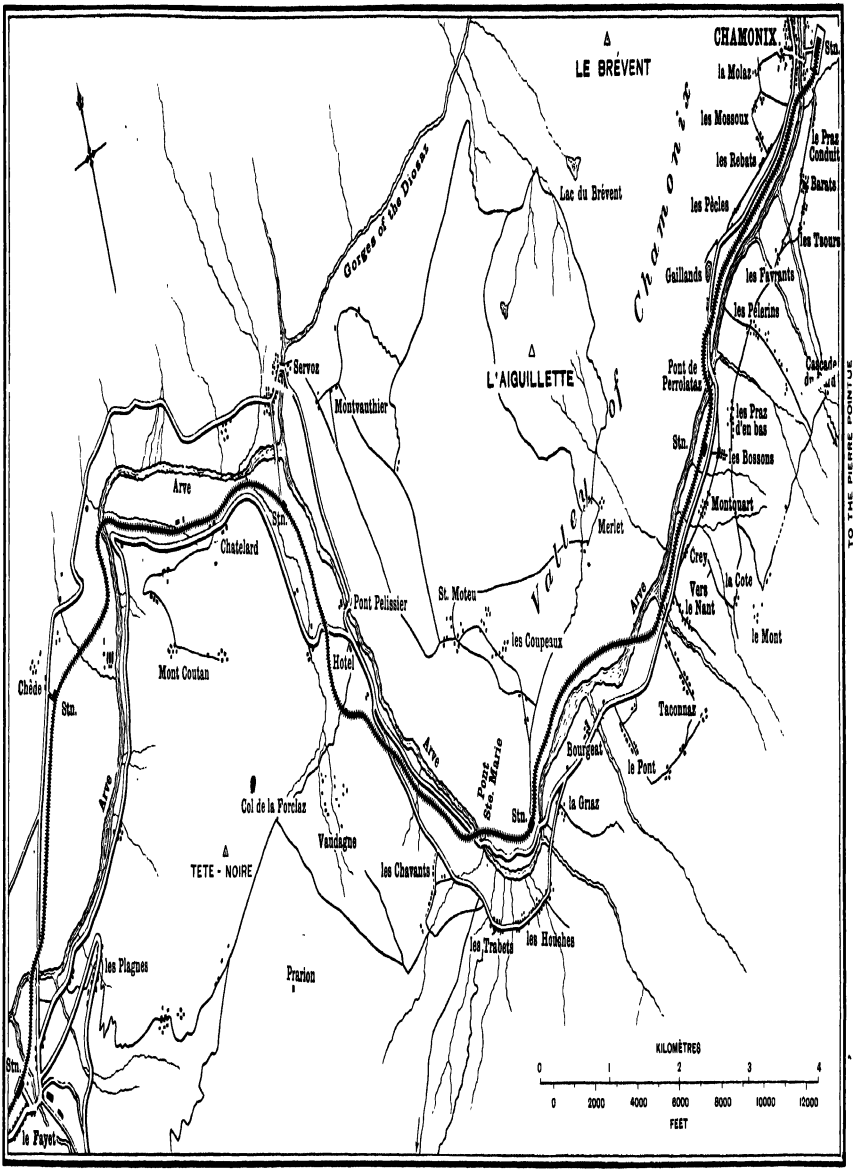
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(4337)
To Martigny
Aiguille
Tour
(3671)
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from the Survey of
VAL FERRET (D'ITALIE)

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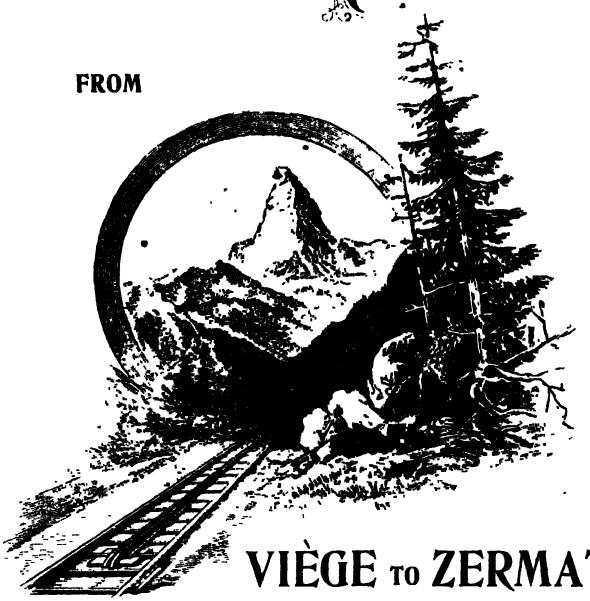


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See back for Time-Table

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VIÈGE TO ZERMATT.

Names of Stations.		Omnib.	Direct.	Omnib.	Omnib.
		A.M.	P.M.	P.M.	P.M.
Brig (Brigue)	Dép.	6.30	*12.27	2.20	6.08
Visp (Viège)	Arr.	6.42	12.40	2.30	6.19
Lausanne	Dép.	...	9.15	12.05	2.20
Vevey	,,	...	9.40	12.28	2.53
Montreux	,,	..	9.53	12.38	3.08
St. Maurice	,,	...	10.47	1.28	4.18
Sion (Sitten)	,,	...	11.47	2.21	5.35
Visp (Viège)	Arr.	...	12.47	3.21	6.59
VIÈGE (Visp)	Dép.	6.50	1.00	3.40	7.25
STALDEN	Arr.	7.13	1.20	4.00	7.45
	Dép.	7.15	1.25	4.03	7.48
Kalpetran	,,	7.31	1.40	4.18	8.03
St. Niklaus (St. Nicolas)	,,	8.05	2.07	4.45	8.30
Herbriggen	,,	8.28	,,	5.06	8.57
Randa	,,	8.51	2.49	5.28	* 9.13
Tæsch	,,	9.03	,,	5.38	9.23
ZERMATT	Arr.	9.23	3.16	5.57	9.42
For the Gornergrat	Dép.	10.00	*4.00	...	...

* Until September 15.

† From July 15 to August 31.

ZERMATT TO VIÈGE.

Names of Stations.		Omnib.	Omnib.	Direct.	Omnib.	Omnib.
		A.M.	A.M.	A.M.	P.M.	P.M.
From the Gornergrat	Arr.	...	9.43	11.27	3.28	..
ZERMATT	Dép.	6.40	10.05	11.37	3.35	*5.57
Tæsch	,,	7.00	10.24	,,	3.54	6.16
Randa	,,	7.11	10.35	12.06	4.05	6 27
Herbriggen	,,	7.31	10.55	,,	4.25	6.47
St. Niklaus (St. Nicolas)	,,	7.55	11.18	12.49	4.49	7.16
Kalpetran	,,	8.19	11.43	,,	5.14	7.35
STALDEN	Arr.	8.32	11.56	1.25	5.27	7.48
	Dép.	8.35	11.59	1.30	5.30	7.51
VIÈGE (Visp)	Arr.	8.55	12.19	1.50	5.50	8.11
Visp (Viège)	Dép.	9.20	12.47	2.35	6.05	...
Sion (Sitten)	Arr.	10.18	2.21	3.27	6.58	...
St. Maurice	,,	11.17	3.52	4.18	8.54	...
Montreux	,,	12.23	5.20	5.16	10.03	...
Vevey	,,	12.41	* 5.33	5.29	10.26	* ...
Lausanne	Arr.	1.15	6.00	5.57	11.10	...
Visp (Viège)	Dép.	10.17	12.52*	2.24	7.03	...
Brig (Brigue)	Arr.	10.30	1.02	2.40	7.15	...

* From July 15 to August 31.

† From July 15 to August 31.

RETURN TICKETS ARE ISSUED AT ALL STATIONS.

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"Our pictures, from photos by Tairraz of Chamonix, give a party of English in search of sun and health. The scene is at le Planet, above Argentière, in Haute Savoie, where Aug. Tairraz (whom members of the Alpine Club will well remember at la Berarde) has built a new hotel. The mountain behind the Hotel is the Aig. Verte. From a height of 4000 to 5000 feet one looks *down* upon Chamonix six miles away, and *up* the whole *massif* of Mont Blanc."—*Bystander*, Jan. 27, 1904.

"The Hotel stands 300 feet *above* Argentière, at the foot of the Col de Balme and the Col de Montet, and at the head of the Chamonix valley. It commands a splendid of the valley and of the chain of Mont Blanc. The Glacier d'Argentière is within a short walk upon the left. The usual simple expeditions in the neighbourhood are within easy reach, while climbers can find plenty of work to do. The air is exceedingly pure and dry. It is also a charming place for a winter holiday; the complete absence of damp and mist is there very noticeable; in winter the lower valley is at times filled with mist, whilst the Hotel is in bright sunshine. A party of English people who stayed there this winter were able to sleep with windows open and without fires in their rooms. The Hotel is well furnished, and the sanitary arrangements are excellent, having been modelled on English advice. There will be an English service (S.P.G.) at the Hotel this summer."—*An Englishman who has been there.*

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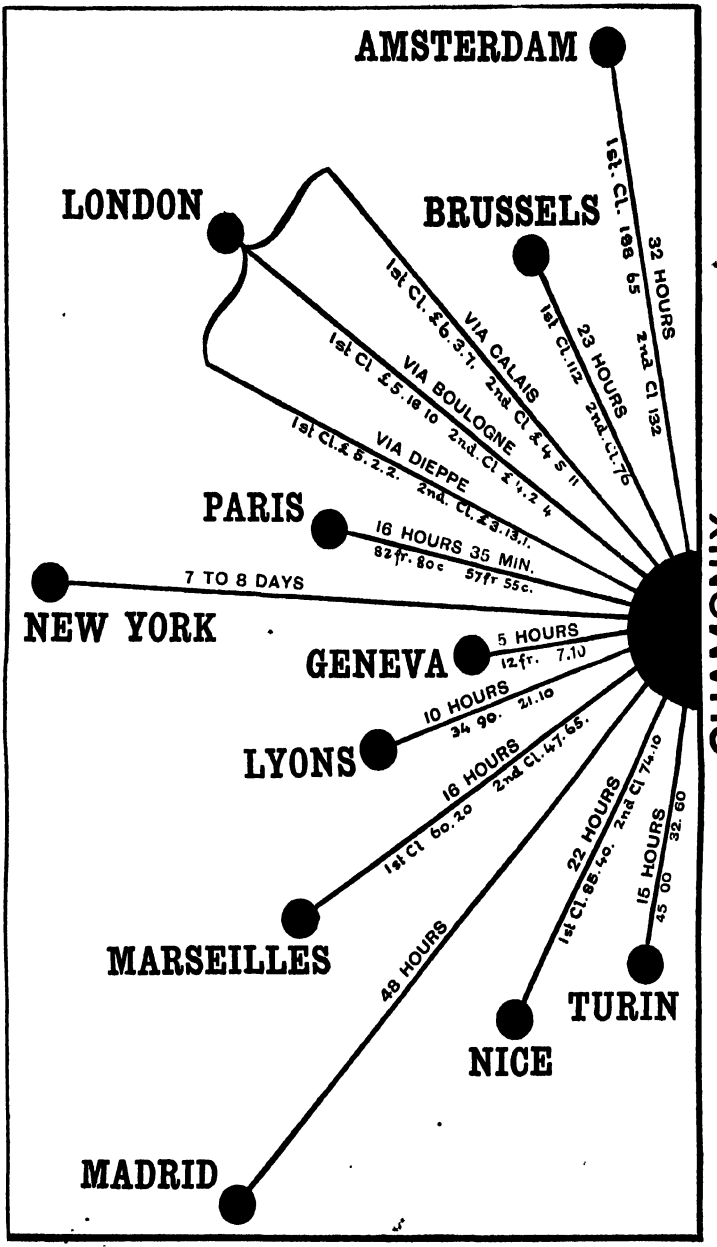
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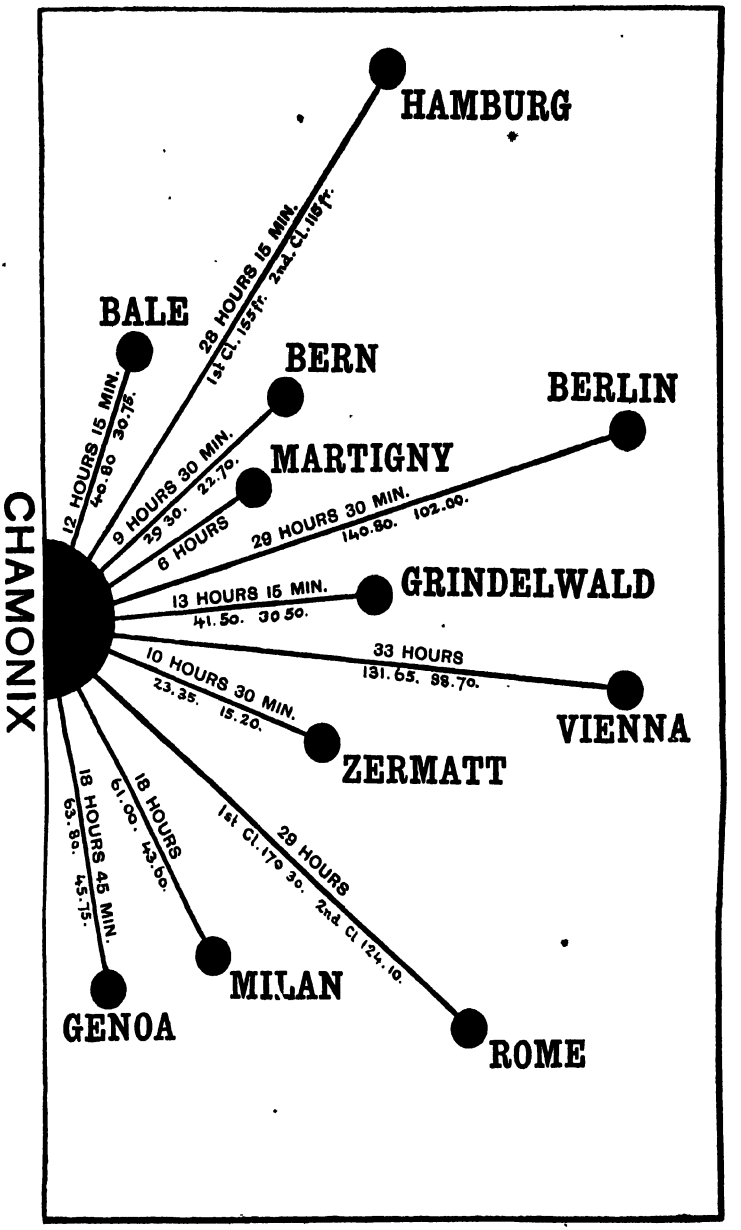
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HOTEL BEAU-RIVAGE, AMI QUAGLIA, *Propriétaire.*

HOTEL BEAU-SITE, CURRAL-COUTTET, *Propriétaire.*

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HOTEL BRISTOL, CLARET-TOURNIER, *Propriétaire.*

HOTELS CACHAT & DU MONT BLANC, CACHAT, *Propriétaire.*

HOTEL CENTRAL, JOSEPH COUTTET, *Propriétaire.*

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TIME-TABLES OF THE SERVICES

BETWEEN

GENEVA-LE FAYET AND CHAMONIX.

ASCENDING.

Paris, Lyons & Mediterranean Railway		a.m.	a.m.	a.m.	p.m.	p.m.
GENEVA, EAUX-VIVES STATION	dep.	5.48	8.36	10.14	1.32	5.44
LE FAYET	arr.	8.51	11.30	1.7	4.30	8.32
Halt for Refreshment.						
LE FAYET	dep.	not known.				
CHAMONIX	arr.					

DESCENDING.

		a.m.	a.m.	a.m.	p.m.	p.m.
CHAMONIX	dep.	not known.				
LE FAYET	arr.					
Halt for Refreshment.						
LE FAYET	dep.	5.15	9.25	1.12	4.2	7.28
GENEVA, EAUX-VIVES STATION	arr.	8.22	12.22	4.4	6.46	10.17

Alterations may occur in the Train Service. Enquire.

PRICES OF TICKETS BETWEEN STATIONS.

		Single Tickets.		Return Tickets.	
Chamonix to	les Bossons	0.80	0.35	1.20	0.55
Do.	les Houches	1.70	0.75	2.50	1.20
Do.	Servoz	2.80	1.25	4.20	1.95
Do.	Chède	3.70	1.65	5.55	2.60
Do.	le Fayet	4.35	1.90	6.55	3.10

NOTICE.

The hours quoted are French time, which is 55 min. later than Central Europe time.

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Admirably situated, fronting the entire Chain of Mont Blanc, with a magnificent panorama of the Oberland and Alps of Dauphiné. The Route by Bel Achat is the only one practicable for mules to the top of the Brévent (2525 mètres). * Excellent Restaurant. * Comfortable Beds. * Very Moderate Prices. * Especially desirable for witnessing sunrise and sunset. * Large Telescope for watching ascents.

COUTTET, *Guide, Proprietor.*

LES PRAZ, 15 Minutes from CHAMONIX

SPLENDID HOTEL.

With incomparable views of the Chain of Mont Blanc. The nearest starting-point for the Flégère and the Mer de Glace. Modern Comfort. Electric Light. Baths in the Hotel. Pension from 5 francs a day. Meals at all hours. Near Les Praz Station. Omnibus meets all Trains. RAVANEL FRÈRES, Guides, Proprietors.

Near the Post-Office. CHAMONIX. Haute-Savoie.

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NOVELTIES * DRESS-MAKING

LARGE SELECTION OF ALL ARTICLES NECESSARY FOR TOURISTS.

* SPECIALITY FOR THE REAL CHAMONIX HONEY *

H. LECHAT.

OPPOSITE TO CHAMONIX POST-OFFICE.

A LA RENOMMÉE

*Great Depôt for Boots and Shoes, and Tourists' Requisites * Batons and Sticks * Dress-making * Mountain-Skirts, Blouses and Knickerbockers.*

* REPAIRS CAREFULLY EXECUTED *

VVE. RMAIN. PAYOT.

HOTEL MODERNE & VICTORIA, CHAMONIX

OPENED IN 1903.

IN THE CENTRE OF THE VILLAGE, WITH A FINE VIEW OF MONT BLANC.

80 ROOMS * LIFT * EVERY CONVENIENCE.

F. PETIT-JEAN, Proprietor.

NEAR CHAMONIX, 2½ MILES FROM LES HOUCHES.

HOTEL-PENSION DE BELLEVUE,

On the Route for Mont Blanc and for the Tour of Mont Blanc. Exceptionally Fine Views of the Chain of Mont Blanc and the Valley of Chamonix * 45 Beds * Pension from 6 Francs.

The Brothers FRÉDÉRIC & ALPHONSE PAYOT, Guides, Proprietors.

CHAMONIX.

ENGLISH AND AMERICAN BAR,

SITUATED ON THE PRINCIPAL PLACE,

With all Sorts of English and American Drinks.

WHISKEY AND SCHWEPPE'S SODA, ENGLISH BEER, HORNIMAN'S TEA, ETC. ETC.

* *The Best Drinks in the Town.* * FÉLISAZ, Barman.

CHAMONIX (RUE NATIONALE, OPPOSITE TO THE HOTEL DE LA CROIX BLANCHE).

J. DUCREY, Shoemaker

Medal at the International Alpine Exhibition, Grenoble, 1892.
SPECIAL MENTION FOR MOUNTAIN BOOTS.
Articles for Excursions * Simond's Piolets (Ice-Axes) kept in Stock.
REPAIRS PROMPTLY EXECUTED.

CHAMONIX, near the Bridge.

AUGUSTE GOIZE,

HAIR-DRESSER * BARBER.
TOURISTS' REQUISITES * PERFUMERY * ENGLISH SPOKEN.
Depot for the 'Veritable' Eau de Cologne.

CHAMONIX (in the Centre of the Town).

A. SIMOND & BROTHERS,

MEMBERS OF THE CLUB-ALPIN FRANÇAIS,

MANUFACTURERS OF ICE-AXES (PIOLETS) FOR ALPINISTS,
AND BELLS (SONNETTES) FOR CATTLE, IN ENGLISH CAST-STEEL.

GOODS TO ORDER CAREFULLY FORWARDED, and Special Sketches made. Piolets from 12 to 20 francs. Alpenstocks from 3 to 5 francs.

Honours Gained:- PARIS, 1er Prix, 1889; GRENOBLE, 1er Prix, 1892; LYON, 1er Prix, 1894.

HOTEL-PENSION DE LA FLÉGÈRE.

La Flégère (1900 metres), 2½ hours from Chamonix, occupies an unique position for viewing the entire Chain of Mont Blanc and the Valley, fronting the Mer de Glace. * 15 Bedrooms. * Starting-point for numerous Excursions, such as Le Belvédère, La Floriaz (with a similar view to that from the Buet, etc. etc. * Attentive Service. * English spoken. * The new path is now open.

DUCREY, Proprietor.

CHAMONIX, Rue Nationale.

F. FÉLISAZ

KEEPS PROVISIONS AND COMESTIBLES IN GENERAL; CROSSE & BLACKWELL'S AND HUNTLEY & PALMER'S GOODS; IRISH AND SCOTCH WHISKY; LIEBIG (LEMCO); MAGGI; PATÉS; PUDDINGS; CAKES AND CONFECTIONERY; BONBONS; AND EVERYTHING THAT IS NICE.

Patronised by Members of the Alpine Club.

CHAMONIX.

LA REVUE DU MONT-BLANC

Gives Time-tables of the Railways and other means of communication in all the districts including AIX-LES-BAINS, LYONS, INTERLAKEN, BRIGUE and ZERMATT; and on every Thursday chronicles the most interesting ascents which have been made in the previous week.

CHAMONIX (Place de la Fontaine)

AU GRAND MAGASIN DU MONT BLANC,

Kept by AUG. COUTTET, Photographer.

PORTRAITS, GROUPS, AND LANDSCAPES OF ALL SIZES * ALBUMS * MATERIALS AND DARK ROOM FOR AMATEURS * WOOD CARVINGS, POLISHED STONES, JEWELLERY, & ORNAMENTAL OBJECTS OF ALL KINDS BOOKS, STATIONERY, & ILLUSTRATED POST CARDS * DRAWING MATERIALS FOR OIL OR WATER-COLOUR.

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THE ATELIER OF TAIRRAZ "THE PHOTOGRAPHER OF CHAMONIX" IS NEAR THE ENGLISH CHURCH.

PORTRAITS, GROUPS, AND VIEWS ARE TAKEN BY

TAIRRAZ

Who has a Large Assortment of Views in Stock of the Aiguilles and Glaciers of the Range of Mont Blanc, and in Dauphiné.

PRINTING DONE * ALL ORDERS PROMPTLY EXECUTED.

CHAMONIX AND MONT BLANC.

LE FAYET-ST. GERVAIS LES BAINS

BUFFET DE LA GARE.

Le Fayet is the Terminal Station of the lines from Bellegarde and Geneva, where all passengers must change carriages for the Electric line to Chamonix. The station at le Fayet is classed as "Gare d'arrêt facultatif," i.e. passengers can stop there at their pleasure.

Meals and Refreshments at all hours, à la carte, and à prix fixe.

F. MOUTHON, Concessionnaire.

Alt. 7195 feet. **CANTON VALAIS.** **Alt. 2193 mètres.**

HOTEL JUNGFRAU

ON THE EGGISHORN,

IN A SUNNY AND SHELTERED SITUATION,

With a MAGNIFICENT VIEW over the PENNINE ALPS.

MODERATE CHARGES * PENSION * ENGLISH CHURCH.

120 BEDS

Two and a half hours by mule-path from **Fiesch**, one and a half hours from the **Summit of the Eggishorn**, and near the **Marjalen Lake.** A good path leads in 3 hours to the **Riederalp**, and in 5 hours the **Concordia Cabane** can be reached, the starting-point for the **Jungfrau, Finsteraarhorn, Monch, Monchjoch, Oberaarjoch, Jungfraujoch, Agassizjoch,** etc. etc.

"The favourite head-quarters of mountaineers on the south side of the Oberland Alps."—*Ball's Alpine Guide.*

E. CATHREIN, Proprietor.

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YE ENGLISH & AMERICAN BOOKSTORE OF GENEVA.

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LIFT. ——— **LIFT.**

100 Well-Furnished Bedrooms, from 2.50 to 4 francs.
Attendance and Electric Light included. Central Steam Heating. Baths.
Dinner Table d'Hote 3.50, & Supper 3 francs, Wine included.
Restaurant. Pension from 7 to 10 francs, everything included.
CHS. SAILER, *Proprietor.*

(Switzerland) GLACIER DU RHONE (Switzerland)

HOTEL DU GLACIER DU RHONE.

1800 MÈTRES * 250 BEDS * ELECTRIC LIGHT.
CATHOLIC CHAPEL * ENGLISH SERVICE * STOPPING-PLACE
FOR DILIGENCES OVER THE FURKA, THE GRIMSEL,
AND TO BRIGUE, BOTH DAY AND NIGHT.

HOTEL-PENSION BELVÉDÈRE
(FURKA ROAD)

2200 MÈTRES * 5 MINUTES FROM THE GLACIER * 90 BEDS.
FINE MOUNTAIN AIR. WALKS & EXCURSIONS. RICH ALPINE FLORA.
THE FINEST POINT OF VIEW ON THE WHOLE OF
THE ROUTE DE LA FURKA.

Will be enlarged in 1904, and provided with every modern comfort for a long stay.

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OPEN FROM 1st JUNE to 30th SEPTEMBER.

Co-Proprietor of the **JOSEPH SEILER-BRUNNER, Proprietor.**
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GENEVA * 31 Quai des Bergues * GENEVA.

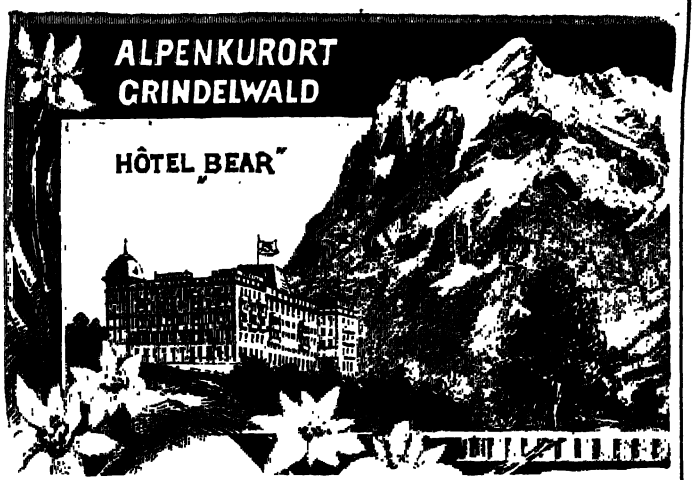
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WINTER SPORTS

SKATING, TOBOGGANING, CURLING,
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NEWLY RECONSTRUCTED WITH EVERY

MODERN COMFORT

OPEN THE WHOLE YEAR.

BOSS BROTHERS, Proprietors.

HOTELS & BATHING ESTABLISHMENTS COMPANY OF

LOUÈCHE-LES-BAINS

Alt. 4233 feet. **(LEUKERBAD, at the foot of the Gemmi Pass)** Alt. 1290 mètres.

Railway Station*: SOUSTE, *on the Simplon Railway.



First-Class Bathing and Alpine Station.

Pure and strengthening air. Recommended by all physicians. Eight hotels under an entirely new management. 600 beds and saloons. Electricity and all modern comforts. French cooking. Fine wines.

Large and comfortable music, reading, and billiard rooms. English newspapers taken. Library. Three closed verandas. Two concerts a day. Balls and "fêtes de nuit." The surrounding forests afford delightful promenades. Centre of numerous excursions and ascents.

Five bathing establishments supplied from more than twenty warm springs at the temperature of 51° C. Massage done on the most modern medical systems. One bathing establishment and two hotels are reserved for Tourists. Large swimming pool. The waters of Louèche have exactly the same properties as the celebrated waters of Bath (England), Louèche having the greater advantage of higher altitude and consequently purer and more invigorating air.

Five Physicians, a Chemist, and a Lady Doctor.

Dark room. Tennis courts, bowling alleys, and playgrounds for children. Hall fitted up for gymnastics. Milk and whey cure. Grape cure.

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English Church. Roman Catholic Church. * Post Office, Telegraph, and Telephone. * Mail Coach three times a day from SOUSTE to the Baths of Louèche and vice-versa.

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THE GRAND HOTEL

L.C. OF THE HOTELS BEAU-SITE AND RICHE-MONT, THE MODERN HOTELS OF LAUSANNE; IN THE MIDDLE OF GARDENS OF 20,000 SQ. MÈTRES; BETWEEN THE RAILWAY-STATION AND THE TOWN.

Lawn Tennis * Splendid View of the Lake and Mountains.
Central Heating * Electric Light * Lifts * Good Ventilation.
Private Bath-Rooms * Open all the Year Round.

J. A. SCHMIDT, *General Manager.*

Canton Valais. MARTIGNY. Switzerland.

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A FIRST-CLASS HOTEL, with a very old reputation. Enlarged, and entirely renovated inside and out, with Luxury and Modern Comfort.

GARDENS * DARK ROOM * BATHS * ELECTRIC LIGHT.
TELEPHONE & TELEGRAPH * GRAND VIEWS.

CARRIAGES FOR CHAMONIX, THE GRAND ST. BERNARD, Etc., AT THE LOWEST PRICES. * OPEN ALL THE YEAR. * PENSION.

OSCAR CORNUT-BRUNNER, *Proprietor & Director.*

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GRAND HOTEL DU MONT-BLANC.

MODERN COMFORT.

Carriages and Diligences for CHAMONIX and the ST. BERNARD start from the Hotel * The Station of the Electric Railway from Martigny to Chamonix, which is to be opened in 1905, is at the side of the Hotel.

GEORGES MORAND, *Proprietor.*

ZERMATT.

BIOGRAPHICAL NOTICE OF JOHANN ZUM TAUGWALD,

WHO MADE THE FIRST ASCENTS OF MONTE ROSA, THE DOM, ETC.
By EDWARD WHYMPER. With Portrait. Price 1 fr. 25 cts.

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RANDA

Near the Station on the Zermatt Railway.

Standing in its Own Garden, away from the Village.

HOTEL & PENSION WEISSHORN,

AND

HOTEL DU DOM

Close to the Station.

RANDA IS AN EXCELLENT CENTRE FOR SOME OF THE FINEST Alpine Excursions, such as the WEISSHORN, DOM, TÄSCHHORN. Magnificent View of the Breithorn. Baths in the Hotel.

R. DE WERRA, *Proprietor.*

Alt. 6316 feet. **CANTON VALAIS.** **Alt. 1925 mètres.**

HOTEL RIEDERALP

NEAR THE END OF THE GREAT ALETSCH GLACIER.

PENSION * MODERATE PRICES * ENGLISH CHURCH SERVICE.

3 hours from the EGGISHORN, 2½ hours from the BEL ALP.

"Commanding a beautiful view of Monte Leone. . . . Many charming strolls in the neighbourhood."—*Murray's Handbook to Switzerland.*

"The beautiful situation and mild climate of this Alp adapt it for a stay of some time."—*Baedeker's Switzerland.*

From the Hotel Riederalp the Ascent of the Aletschhorn can be made in one day.

E. CATHREIN, *Proprietor.*

The Pension Riederfurka (alt. 2100 mètres, 6890 feet) is kept by the same Proprietor.

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GRAND HOTEL RIGHI VAUDOIS.

A FIRST-CLASS HOTEL, CONSIDERABLY ENLARGED AND NEWLY FURNISHED, WITH EVERY MODERN COMFORT.
NEW DRAINAGE AND LIFT.

MOST SPLENDID SITUATION.

Moderate Prices.

Open all the year. F. RIECHELMANN, *Proprietor.*

VILLAGE OF ST. GERVAIS-LES-BAINS (Alt. 810 mètres).

SPLENDID HOTEL & DES ÉTRANGERS.

OLD-ESTABLISHED REPUTATION

LARGE TERRACES AND GARDENS.

E. BATTENDIER, Proprietor.

(Alt. 2658 ft.) SAINT GERVAIS-LES-BAINS (Alt. 810 mètres.)

HOTEL DU MONT BLANC.

With its *dependances* is the most advantageously-situated Hotel at the Village of St. Gervais-les-Bains. Post and Telegraph near the Hotel.
"Station Climatérique" recommended by all Doctors.
SEVERAL LANGUAGES SPOKEN. ✱ A. CHAMBEL, *Proprietor.*

ST. NICOLAS (ST. NIKLAUS),
Valais, Switzerland. Alt. 1130 mètres.

GRAND HOTEL-PENSION St NICOLAS

THIS Hotel—half way from **Visp** to **Zermatt**, near the Railway Station and outside the village—offers to Visitors a quiet, homely English Family House. Chaplain in the Hotel during the Season.

Pleasant and not difficult Excursions to the **Schwarzhorn** (Mule Path half-hour from the summit), one of the best Panoramas to be seen; to **Hannigalp**; the **Ried Glacier**; by the **Augstbord** and **Jung Passes** to **Gruben, St. Luc**, and **Zinal**; and by the **Ried Pass** to **Saas-Fée**. Excursions for good climbers—Ascents of the **Dom, Weisshorn, Brunneghorn, Ulrichshorn, Nadelhorn, Balfrin**, etc.

Guides, Porters, Saddle-horses. Carriages for two and three persons below Railway prices. Visitors walking from **Visp** should profit by the nice drive from **St. Nicolas** to **Zermatt** through forests and meadows. This Hotel is specially suitable for staying Visitors; plenty of Walks, close to Forests, and good place for Sketching.

Meals à la carte at all hours.

LUNCH AT 12.30. DINNER AT 7. MODERATE CHARGES.

Special Arrangements for People staying, and also for Large Families and Children.

F. ZAHLER, *Proprietor.*

ST. NICOLAS (NIKLAUS),

HOTEL-PENSION LOCHMATTER.

MEALS À LA CARTE AT ALL TIMES.
Lunch, 2.50 to 3 francs. Bedrooms from 1 to 3 francs.
FAMILIES OR SINGLE PERSONS RECEIVED EN PENSION ON VERY MODERATE TERMS.
ALEXANDER LOCHMATTER, Proprietor.

CHAMONIX.

BIOGRAPHICAL NOTICE OF JEAN PAYOT,

THE OLDEST GUIDE OF CHAMONIX.
By EDWARD WHYMPER. With Portrait. Price 1 fr. 25 cts.
H. KÜNDIG, CORRATERIE 11, GENEVA; PAYOT FRÈRES, RUE DU PONT, CHAMONIX.

Canton Valais—**SIERRE**—Switzerland.

HOTEL-PENSION CHATEAU BELLEVUE.

FAVOURITE WINTER RESORT

for persons requiring dry air and sunshine, for which the climate is renowned. Lately enlarged and fitted with every modern comfort. Handsome Dining Room, Billiard, Reading, and Smoking Rooms; large glazed Verandah full south. Heated throughout. Excellent Cooking and Abundant Table, Good Wines, etc. Double Tennis Court. New English Church adjoining the *Hotel—Services all the year.*

TROUT-FISHING, SKATING AND TOBOGGANING NEAR THE HOTEL.

Dark Room for Photographers. English Sanitary Arrangements. Near Railway Station. Post and Telegraph. Terms from 7 to 12 francs a day. Carriages to be had of any description.

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Alt. 4777 feet. **TAESCH.** Alt. 1456 mètres.

HOTEL DU TAESCHHORN

IS CLOSE TO THE RAILWAY STATION,
IN A HEALTHY SITUATION, COMMANDING SPLENDID VIEWS OF
THE BREITHORN AND PETIT MONT CERVIN,
AND IS THE BEST STARTING-POINT FOR THE TAESCHALP, WHICH IS SURROUNDED BY SOME OF THE GRANDEST PEAKS IN THE ALPS.

RUSTIC WALKS CAN BE TAKEN ALL AROUND IN THE MAGNIFICENT FORESTS.
GRAND CORGE BEHIND THE VILLAGE. * PATHS TO THE WEISSHORN CABANE, ETC.
PUREST SPRING WATER. * LARGE SALLE-A-MANGER. * 46 FINE BEDROOMS.

Alt. 4249 feet. **TRIENT.** Alt. 1295 mètres.

On the Road from Chamonix to Martigny.

GRAND HOTEL

A FIRST-CLASS HOUSE, SITUATED HALF-WAY BETWEEN CHAMONIX AND MARTIGNY * MODERATE PRICES.

PENSION CAN BE ARRANGED.

NUMEROUS EXCURSIONS * CARRIAGES AND MULES.
BATHS IN THE HOUSE * BILLIARDS * GARDEN * ELECTRIC LIGHT.

Post and Telegraph. GAY & FRASSERAN, *Proprietors.*

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FIVE MINUTES FROM ZERMATT, NEAR THE PARISH CHURCH.

FINE WATERFALLS. * ELECTRIC LIGHTS
EVERY EVENING. * MEALS & LODGING.
EXCELLENT ROOMS—COMFORTABLE—SAFE.

JOHANN WELSCHEN, *Proprietor.*

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(HOTEL MONNET)

HEALTHIEST AND FINEST LOCATION * GREAT COMFORT.
MODERATE TERMS * LARGE SHADY TERRACE ON THE LAKE.
LIFT * ELECTRIC LIGHTING THROUGHOUT.
CENTRAL HEATING.

Concerts. Open all the Year Round.

COOK'S TICKETS ACCEPTED.

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THE NEAREST HOTEL TO THE POST AND TELEGRAPH OFFICE * ON THE TELEPHONE * FINE GARDEN * MAGNIFICENT VIEWS OF THE ALPS FROM THE HOTEL * QUIET POSITION * OMNIBUS (FREE OF COST) MEETS ALL THE TRAINS * GOOD COOKING * BEER ON DRAUGHT * LOW PRICES & SPECIAL TERMS CAN BE ARRANGED FOR A PROLONGED STAY * CARRIAGES FOR THE SIMPLON, FURKA & GRIMSEL PASSES * STABLING FOR CYCLISTS & AUTOMOBILISTS.

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THE ENGLISH CENTRAL PHARMACY OF THE CANTON VALAIS.

SIERRE. * ZERMATT.

J. M. DE CHASTONAY, Chemist.

GOODS SENT BY PARCEL POST.

LADY-BARBER **ZERMATT.** HAIR-DRESSER
BY THE SIDE OF THE MONTE ROSA HOTEL.

MARIE BINER

SOAPS * TOILET REQUISITES * SCENTS
WHYMPER'S GUIDES.
PATRONISED BY MEMBERS OF THE ALPINE CLUB AND BY PERSONS OF DISTINCTION.

ZERMATT (Opposite Hotel de la Poste).

LOUIS BURGENER

FIRST-CLASS SHOEMAKER * PATRONISED BY ENGLISH.
MOUNTAIN AND ALL OTHER SORTS OF BOOTS.
*Repairs quickly executed * Every kind of Nails * Moderate prices.*

ABOUT 50 MINUTES FROM ZERMATT RAILWAY STATIONS.
1969 mètres (6460 feet) above the sea.

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(the path to it starts on the West side of the Catholic Church).

Grand Views of the Matterhorn, Breithorn, Castor & Pollux, Lyskamm, Monte Rosa, Rimpfischhorn, Mischabelhörner, Zinal Rothhorn, Gornergrat Railway, and the Valley of Zermatt; surrounded with Edelweiss and all sorts of rare Alpine plants.

FINE MULE-PATH TO THE TRIFT HOTEL AND PATH TO THE HOHLICHT.
LOW PRICES FOR LONG STAY * RESTAURATION AT ALL HOURS.
PORTER MEETS ALL THE TRAINS * OPEN ON MAY 15.
JOHANN WELSCHEN, *Proprietor.*

AT HEUETEN, THREE-QUARTERS OF AN HOUR FROM ZERMATT.

1769 MÈTRES. **WALDESRUHE** 5804 FEET.

ON A BEAUTIFUL, ELEVATED POSITION, COMMANDING SPLENDID VIEWS
OF THE MATTERHORN, DENT BLANCHE, OBER-GABELHORN,
ROTHHORN, WEISSHORN, DOM AND TAESCHHORN,
BIETSCHHORN, ALETSCHHORN & GLACIER,
AND MOUNTAINS OF THE OBERLAND.
MEALS AT ALL HOURS.
PENSION AT MODERATE PRICES * REDUCTIONS MADE FOR LONG STAY.
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ELIAS LAUBER & PETER LUDWIG PERRN, Proprietors.

TWENTY-FIVE MINUTES FROM ZERMATT.

HOTEL MORGENROTH

GRAND VIEWS OVER ZERMATT AND THE MATTERHORN.

LUNCH AT ALL HOURS * LOW PRICES FOR PENSION.
PURE, CLEAR SPRING WATER * COLD & WARM BATHS.
CLOSE TO THE WOODS & CHURCH. FINE EXCURSIONS.
FRANZ BINER, Proprietor.

Very Moderate Prices. **ZERMATT.** *English spoken.*

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Just outside the Village, 15 minutes from the Railway Stations,
IN FULL VIEW OF THE MATTERHORN AND MISCHABELHÖRNER,
surrounded by trees, in an admirably quiet situation. Guides and Mules can be had. A Porter meets all the Trains. JOHANN KRONIG, Proprietor.

ZERMATT.

GRAND HOTELS VICTORIA & D'ANGLETERRE.

The nearest to the Zermatt & Gornergrat Railway Stations.

MODERN COMFORT. * ELECTRIC LIGHT. * GARDEN.

SPLENDID VIEWS OF THE
MATTERHORN, BREITHORN, AND MISCHABELHÖRNER.

NICE COOKING * EXCELLENT WINES * MODERATE PRICES.

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HOTEL GORNERGRAT.

NEWLY CONSTRUCTED * COMFORTABLE * CONVENIENT.

Near the Railway Station.

PENSION * RESTAURATION at all HOURS * REASONABLE PRICES.

MUCH PATRONISED BY ENGLISH FAMILIES.

Open from May 15 to October 31. English spoken. Baths.

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IN THE GORGE OF THE TRIFT, 2200 MÈTRES ABOVE THE SEA.

Two Mule-Paths lead to the Hotel from the Railway Station.

IS ON THE ROUTE FOR THE METTELHORN, TRIFTPASS, ROTHHORN, GABELHORN, WELLENKUPPE, ETC.

PENSION * RESTAURATION AT ALL HOURS.

Guides and Mules can be obtained.

THE HOTEL CORNERGRAT AND HOTEL TRIFT ARE KEPT BY THE SAME PROPRIETOR.

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On the right bank of the Mattervisp, across the Bridge, quietly situated, surrounded by a Garden, with Grand Views over THE VALLEY OF ZERMATT AND THE MATTERHORN. Very Moderate Prices. Lunch from 2 fr. 50 cts. Afternoon Tea. Special arrangements for Families or for prolonged stay. Guides and Porters can be supplied. MATHIAS AUFDENBLATTEN, *Proprietor.*

Avenue de la Gare. **ZERMATT.** Avenue de la Gare.

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With Dependance in a Magnificent Situation close by, having a Splendid View of Mont Cervin * 40 Beds * Comfortable Rooms * Electric Light * Meals at all Hours * Beer on Draught * Vins du Pays * Attentive Service * Pension from 5 to 6 frs., or 7 to 8 in the height of the Season. * Special arrangements for a long stay. HERMANN PERREN, Guide, *Proprietor.*

ZINAL

VALLÉE D'ANNIVIERS, CANTON VALAIS.

Height above Sea, 1680 mètres (5512 feet).

HOTEL DES DIABLONS

100 BEDS.

HOTEL DURAND

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30 BEDS.

Open from the 1st June to the 1st October.

"Station Climatérique."

A Centre for a variety of Excursions.

ENGLISH CHURCH SERVICE.

Special Arrangements can be made for Families.

PENSION FROM 6 TO 14 FRANCS.

THE ZINAL HOTELS COMPANY,
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CANADIAN PACIFIC RAILWAY.

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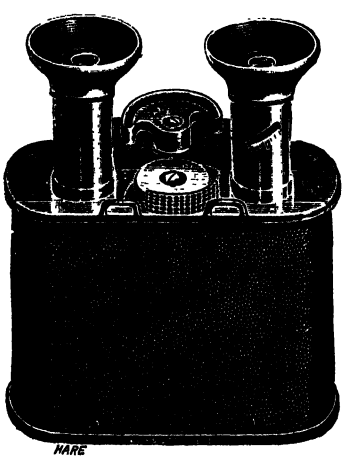
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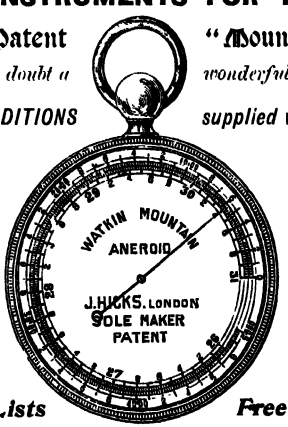
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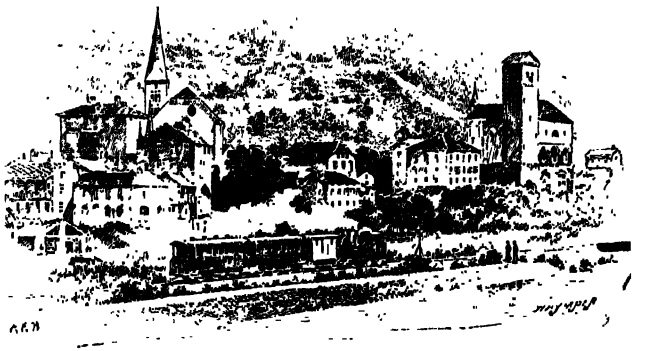
ZERMATT, THE MATTERHORN, & THE VAL TOURNANCHE.

1. "EDELWEISS! PLEASE BUY MY EDELWEISS!"
2. THE GABELHORN IN WINTER.
3. AN OLD PUBLIC SERVANT—A MEMBER OF THE CIVIL SERVICE (PORTRAIT OF JOST).
4. SERACS ON THE ZINAL SIDE OF THE GABELHORN.
5. THE VALLEY OF ZERMATT.
6. ANTOINE MAQUIGNAZ STANDING FOR HIS PORTRAIT.
7. THE ICE-FALL OF THE GORNER GLACIER, UNDER THE RIFFELHORN.
8. THE CHEESEMAKER (SEE "SCRAMBLES AMONGST THE ALPS," CHAP. XII).
9. THE TÊTE DU LION, SEEN FROM THE FOOT OF THE GREAT TOWER.
10. DANIEL MAQUIGNAZ DESCENDING.
11. THE MATTERHORN IN OCTOBER, AFTER A GREAT SNOWFALL.
12. WASHING-DAY AT BREUIL.
13. THE TRACK OF AN AVALANCHE.

MONT BLANC & CHAMONIX.

14. SUNSET FROM MONT BLANC, LOOKING OVER SALLANCHES.
15. THE 'JUNCTION' (BELOW THE GRAND MULETS).
16. THE VIEW FROM THE GRANDS MULETS.
17. A SCIENTIFIC ASCENT (DR. JANSSEN ON THE WAY TO THE SUMMIT).
18. A RACE FOR THE SUMMIT, SEEN FROM THE ROCHERS ROUGES.

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VISP (VIÈGE).

CHAPTER I.

ON THE EARLY HISTORY AND RISE OF ZERMATT.

A LEGEND—THE BISHOP OUTWITS SATAN—DISCOVERY OF ROMAN COINS UPON THE THEODUL PASS—EARLIEST MENTION OF VISP AND ST. NICHOLAS—THE LORDS OF THE VALLEY OF VIÈGE—EARLIEST MENTION OF ZERMATT—TREATY BETWEEN THE MEN OF ZERMATT AND THOSE OF VAL ANZASCA—ZERMATT A CAUSE OF DISSENSION—THE DE LA TOUR FAMILY—MURDER OF THE COMPTESSE DE VIÈGE AND HER SON—WAR IN THE VALAIS—THE END OF BISHOP TAVELLI—NEW MASTERS AT ZERMATT—THE ZERMATTERS BECOME FREEHOLDERS, AND REPUBLICANS SOON AFTERWARDS—DESCRIPTION BY BOURRIT—ZERMATT ANNEXED TO THE FRENCH EMPIRE—THE VALAIS JOINS THE SWISS CONFEDERATION—DE SAUSSURE—VISIT OF THE FIRST ENGLISHMAN TO ZERMATT—GROWTH IN POPULARITY—THE FIRST ASCENT OF MONTE ROSA—ALEXANDRE SEILER I.

THE Village of Zermatt (formerly called Prato Borno or Pratoborno, Pra Borno, Pratoburnoz, Praborgne or Praborny) lies at the southern end of a valley which is one of the lateral branches of the great Valley of the Rhone. It is an older place than one would suspect from its appearance. From documentary evidence which will be referred to presently, it is apparent that the valley in which it is situated was *peopled* six to seven centuries ago. It was *known* in much earlier times. There is a tradition current in the Valais to the effect that the pass called the Col Theodul (Théodule) is named after the first Bishop of Sion,[1] and that he crossed it under remarkable circumstances.

"The Pope of this time—it was in the fourth century—had

[1] St. Théodule is said to have been Bishop of Sion from 381-391 A.D.

presented a very fine bell to the saintly prelate of the Valley of the Rhone, recently converted to Christianity. But what a task, at the beginning of the *moyen âge*, to transport such a mass of brass from the banks of the Tiber to the bosom of the Alps! Grateful as the holy Bishop was to the sovereign Pontiff for this act of generosity, he scarcely dared cherish the hope of seeing the faithful drawn to church by the sonorous tones of the papal bell, for the expense of transport was out of all proportion to the value of the gift.

What could be done?

The Bishop might have reflected a long time without finding a solution of the problem, if Satan, ever on the watch to pick up a soul, hadn't offered to transport the bell on his back, from Rome to Sion, in a single night;—on one condition, namely, that if he arrived within the walls of the Valaisan capital before cock-crow, the soul of St. Théodule should be his for ever.

The Bishop closed with the offer, and, the same evening, Satan set out with the heavy bell and the Bishop clinging to it. The only *souvenir* of this wonderful journey is that the Col du Théodule, by which the Valais was entered, took the name of the holy man from this period.

The Devil reached the Valley of the Rhone and the city" [Sion] "long before dawn, and, joyous at having bagged the soul of a bishop, had already taken a bound to clear the walls, when the Saint cried out from the bell—

Coq, chante!
Que tu chantes!
Ou que jamais plus tu ne chantes!

and immediately a piercing concert rent the air- all the cocks of Sion awoke at the voice of the worthy prelate, and it is from this moment that they began to crow so early in the morning.

At this noise, the demon let fall the bell (which buried itself several feet in the ground), and vanished without a word to express his disgust."[1]

M. Alfred Cérésole, *pasteur à Vevey*, gives another version of the same legend.

"It is known," he says, "that Théodule, the first bishop of Sion and patron of the Valais, was a saint to whom popular tradition attributed remarkable influence, even over demons. One day at Sion, he learnt suddenly that the Pope, at Rome, was in great danger, and that it was his duty to warn him, to save his life. Troubled in spirit, and not knowing how to send a speedy message to the Holy Father, he opened his window and saw three devils dancing merrily on a roof. The saintly bishop beckoned to them to come near, and asked which was the liveliest. 'I,' answered one, 'I am as swift as the wind.' 'I,' said another, 'I fly like a bullet' [*comme une balle de fusil*].[2] 'This couple,' said the third, 'are idle talkers, I am as quick as the thought of a woman.' 'Well,' said Théodule, 'I treat with *you;* and I declare that I am yours, if, before the sound of cock-crow, you take me to Rome and back again.' The bargain was concluded. Satan

[1] Quoted from *Les Veillées des Mayens* by L. Courthion, Geneva (no date).

[2] Whence it appears that fire-arms were known in the fourth century!

selected a fine black cock, and set it as a sentinel, against his return, on the wall around the town. The bishop put a white cock on the roof of his château, and told it not to go to sleep until he came back. The journey to Rome was as quick as lightning. The Holy Father expressed his gratitude to Théodule by presenting him with a bell for his church, and the Devil undertook to carry the gift to the Cathedral of Sion. Before two o'clock in the morning, the bishop with his bell and its porter were back again. Satan took a short cut, and scaled the Alps at a bound by the pass between the Cervin [1] and Breithorn. The episcopal cock, wide awake on the roof, heard a great row, and crowed lustily as he saw his master flying through the air, and the black cock did the same. The Devil, on arriving at Sion, furious at finding he had lost his bet, hurled the bell with such force to the ground that it was buried nine arms-lengths in the soil."

From these accounts it seems that St. Théodule was acquainted with the Devil, and to have been even more astute than the Prince of Darkness. The Diabolical One appears to have been badly treated upon this occasion; for, according to both the relations, he carried out a difficult undertaking very successfully, and got nothing for his trouble,—which must have added to the many 'sorrows of Satan.'

There is a strong presumption, approaching certainty, that the Theodul Pass was traversed long before the fourth century.[2] At different times, many Roman coins have been discovered upon it, even upon its summit (10,890 feet). In the collection which has been formed by Mons. Joseph Seiler[3] of Brieg, the dates of the Roman coins which have been found upon the Theodul Pass range from about B.C. 200 to 400 A.D. Amongst others, the collection embraces examples of

NERVA.	VICTORINUS.
FAUSTINA I.	CLAUDIUS II.
MARCUS AURELIUS.	DIOCLETIANUS.
FAUSTINA II.	CONSTANTINUS I.
SEPT. SEVERUS.	VALENS.
MAXIMINUS I.	VALENTINIAN II.
GALLIENUS.	THEODOSIUS.

In some instances these coins may have been simply lost *en route*. In others, it is very likely that they were deposited intentionally; but, whichever supposition is adopted, one is led to conclude that the pass was traversed at a very early date.

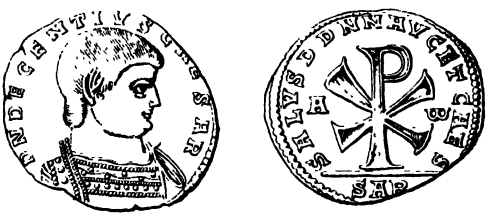
One of the most curious 'finds' of Roman coins that has occurred

[1] Sometimes called Col du Mont Cervin, or Matterjoch. Upon the current Government Maps of Switzerland it is termed Matterjoch or Theodulpass.

[2] The neighbouring pass of the Simplon was in regular use in the third century, if not earlier. "Une colonne milliare érigée (au III siècle) sous les césars Volusianus et Gallus découverte à Sion porte le Leuga XVII, distance exacte de cette ville au point culminant du Simplon." "Les gazettes piémontaises ont parlé de la découverte récente d'une autre colonne milliare dans la vallée d'Ossola dont l'inscription indiquerait que la route du Simplon fut ouverte dans les dernières années du *deuxième siècle*." —*Developpement de l'indépendance du Haut-Vallais et conquête du Bas-Vallais*, par M. Fréd. de Gingins-la-Sarraz, 8vo, Lausanne, 1844, p. 72.

[3] Mons. Joseph Seiler very kindly favoured me by transmitting his collection to London for examination. I am much indebted to Sir John Evans for the determinations. There were *two* coins of Gallienus and *two* of Diocletian, but only single examples of all the others.

upon the Theodul Pass happened in 1895, close to the summit. On August 24 of that year, a girl employed in the kitchen of the inn went out to fetch some water; and, about fifty mètres down, upon the Italian side, spied two coins sticking out from underneath a thin, flat stone, which had a large, square stone on the top of it. She lifted off the two stones and found fifty-four coins underneath the lower one, all together in a clump, and they had apparently been enveloped in a bag, which had rotted. The flat stone had been used to conceal them, and the square, heavy one to keep the other in its place, and they had possibly remained in this position for centuries. Sir John Evans has identified in this collection three coins of AURELIANUS, A.D. 270-275, eight of PROBUS, A.D. 276-282, nineteen of CONSTANTIUS II, A.D. 335-361, nine of CONSTANTIUS GALLUS, A.D. 351-354, one of MAGNENTIUS, A.D. 350-353, and two of DECENTIUS, A.D. 351-353. One of these latter is given below.[1]



COIN OF DECENTIUS (A.D. 351-353), WITH CHRISTIAN SYMBOL.

Nothing is known about the Valley of Zermatt during these remote times, and one has to come down to the beginning of the 13th century for the first documentary references to it. The earliest is given in the great work by the Abbé Gremaud.[2] It is a declaration, dated 1218, that Guillaume, *chevalier*, of Viège (Vespia) *gave* to the *Curé* of that place his rights over tithes at Lalden (Laudona), a small village in the Valley of the Rhone, a little higher up than Viège. This is followed in Gremaud's work by a deed [No. 274], dated 1218, which states that one Conradus *sold* tithes to the same *Curé*; and that document is witnessed, amongst others, by Henselmus, *major* of

[1] The place where this 'find' was made is 160 to 170 feet from the inn at the summit, and 50 to 60 feet below it, and is away from the track usually followed when crossing the pass. The girl's duties led her in that direction. She went to fetch water, which is collected there from the dribbles of snow-water running off the rocks; and she made her discovery through the rocks (in August, 1895) being unusually free from snow. Eleven of the coins were sold to passers-by and others, at fifty francs apiece and downwards, before I had an opportunity to examine the collection.

[2] *Documents relatifs à L'Histoire du Vallais*, recueillis et publiés par l'Abbé J. Gremaud, 7 vols., 8vo, Lausanne, 1875-91. The first five volumes of this work were brought out at the expense of the Société d'histoire de la Suisse romande. The publication was then suspended for nine years from want of funds, and it has been continued by means of subsidies from the Confederation and the Valaisan Government. The seven volumes extend to more than 4300 pages, and include 2817 documents (from the earliest times down to A.D. 1431), which embrace Wills, Treaties and Deeds, largely intermingled with records of disputes, threats, and other unpleasant matters.

Chouson (St. Nicholas).[1] The *majors* of these times were hereditary officials, who exercised jurisdiction in their districts; received complaints, imposed fines, and enjoyed various privileges; and, as *majories* were confined to the larger places, this shews that, even at the beginning of the 13th century, the Village of St. Nicholas was accounted of some importance.

In the *middle* of the 13th century the property in the Valley of St. Nicholas, or a large part of it, belonged to the Comtes de Biandrate. According to the Baron Frédéric de Gingins-la-Sarraz, who wrote a Memoir[2] upon the family, the Biandrates[3] were, from the 11th century, amongst the most powerful barons in Piedmont. He says that they took their name from a small but very old town in the Province of Novara, and mentions three different branches of the family, one of them being the Comtes de Biandrate of the Valais. It is with this branch we are alone concerned.

Godefroi III, Count of Biandrate, *seigneur* of the Val Sesia, married Aldise daughter of Pierre de Castello, who was *seigneur* of neighbouring valleys. This latter bestowed upon his son-in-law his possessions in the Val Anzasca, by a deed dated June 8, 1250; and by his marriage the Count also acquired property in the Valais, which had come to his wife by the maternal side. Her mother is said to have belonged to the house of the *seigneurs* de Viège, which was rich and powerful in the 13th century. "The domains of these lords extended over the Valley of Viège" (Nicolai Thal or Valley of St. Nicholas), "which ends at Monte Rosa"; and, in the Valley of the Rhone, up to the sources of that river.[4] The property gained by marriage appears to have been acquired before 1250, for in the deed of that date the Comte de Biandrate reserves to himself right to transfer a portion of his Valaisan serfs to the Italian valleys; and, according to Gingins-la-Sarraz, this was actually done at a later date.[5] The same author says that upon the death of two uncles, in about 1258, the ancestral domains devolved upon the Countess Aldise.

The Count Godefroi III died in or about 1270, leaving three sons —Guillaume, Jocelin, and Pierre, the latter of whom died about two years after his father. Guillaume had the property in Piedmont as his share of the family possessions; and Jocelin took that in the Valais, with the exception of the Château of Viège and its *dépendances*, which were reserved to the mother for life. The domains of the two brothers were subsequently augmented by a gift from their grandfather, Pierre de Castello, who made over to them all that belonged to him on the Simplon between Crevola (near Domo d'Ossola) and Brigue. Jocelin also appears to have come into

[1] In the Gremaud documents, the following variations in spelling can be found. Chauson, Schosun, Schauson, Schouson, and Zauxon.

[2] *Documents pour servir à l'histoire des Comtes de Biandrate recueillis dans les Archives du Vallais*, et précédés d'une notice par le Baron Frédéric de Gingins-la-Sarraz, 4to, Turin, 1847.

[3] Blandratae or Blandrate, in Latin; Biandrate or Biandra, in Italian; and Blandra in the dialect of the Upper Valais.

[4] Gingins-la-Sarraz, p. 21.

[5] The aim of this transplantation (which it is said was expressed in the deed) was to put an end to ceaseless quarrels between the Valaisans and Piedmontese about pasturages.

possession of some of the Novara property which had passed to his younger brother; to have added to his wealth by marriage; and ultimately, when he "inherited the estates of his mother, he found himself one of the richest *seigneurs* in the Upper Valais."

It does not seem, however, that the Biandrates had absolute dominion in the Nicolai Thal, for there is a document in existence [Gremaud, No. 737] dated Rarogne, May 12, 1268, in which Rudolph of Rarogne makes over his rights and possessions in the parish and valley of St. Nicholas to his wife, daughter of Girold de la Tour; and there is evidence which leads to the same conclusion in a deed printed by Ruden in his *Familien-Statistik*,[1] which runs thus:-

"All believers in Christ are hereby informed that I Walter de Ried with the pious consent of my son Peter, and of my daughters Salome and Hemma (my other children were under age), and of Johannes de Ried guardian of the said children, have sold and devised for twelve pounds, which he has paid, to Walter son of Emke and his heirs, my meadow in Finellen[2] and the house which is built upon it, with the cellarage, and my share in the ekkun,[3] with the water and with everything else that may pertain to the said property. I have caused a deed to be drawn and duly signed by witnesses, who are Matthä de Stadel, Jacobus in spisse, Thomas de Wiestin, and Walter priest of Pratoborno,[4] who completed this deed at the place of Normandus, precentor and chancellor sedunensis,[5] in which place I Peter sworn chaplain have written it. He who shall dare to oppose this deed let the curse of God be upon him and pay to the King sixty pounds and a gold obolus. Done at Pratoborno A.D. 1280, on the 27th of the wine-month.[6]

Ruden (who was Curé of Zermatt from 1845 to 1865) says that this deed is preserved in the parish archives. It shews that there was a priest at Zermatt in 1280, and doubtless there was a church there at that time, inasmuch as the Normandus (Precentor of Sion) who is mentioned in it left by his will, dated 1285, a legacy to the Church of Pra Borno [Gremaud, No. 1153]. The property sold by Walter of Ried was at Findelen, which is at the present time the most elevated and the most remote of the hamlets round about the main village of Zermatt. The more distant hamlets would naturally be the last to be peopled; and, as Findelen clearly was in existence in 1280, it may fairly be presumed that Zermatt itself was an established place at some much earlier date.

In 1291, Jocelin, compte de Biandrate, and his nephew Jean (son of his brother William), with the men of Saas, St. Nicholas, and Zermatt on the one part, made a treaty of peace with the men of the Val Anzasca on the other part [Gremaud, No. 1021], and this is evidence that the Biandrates were lords in those districts, and that there were communications between the Valaisan and the Italian valleys in those remote times. But this family would seem

[1] *Familien-Statistik der löblichen Pfarrei von Zermatt, mit beilagen.* Gesammelt und geordnet von Joseph Ruden, 8vo, Ingenbohl, 1869. The original deed is in Latin. A German translation is appended.

[2] Findelen. [3] There is an 'alp' called Eggen close to the village of Findelen.

[4] The old name of Zermatt. [5] Of the cathedral of Sion.

[6] The original reads "Actum apud Pratobornum anno Domini M.CC.LXXX.V. Kal. Octob. Rudolpho regnante, Petro episcopante." The former was Rudolph of Habsburg, and the latter was Pierre d'Oron, Bishop of Sion from 1274 to 1287.

to have parted with some of its possessions not long afterwards, for in the Will of Pierre de la Tour, *seigneur* of Châtillon, which was made in 1350, the valleys of St. Nicholas and Zermatt were bequeathed to his three sons.[1]

About this time, the Valley of Zermatt became a cause of dissension. In the 12-14th centuries the greatest family in the Valais was that of De la Tour de Châtillon. The origin of this family is lost in the mist of ages. Dr. Schiner stated[2] that *he* possessed a manuscript which shewed that it was in existence before A.D. 1000. The De la Tours were strong enough to defy and to fight the Bishops of Sion, and they were frequently in hot water.[3] They were vassals both of the Bishop of Sion and of the Count of Savoy, and in the event of war between the Valais and Savoy were bound to supply soldiers to the former, and personal aid to the latter—a dual responsibility which from a business point of view was not likely to work well.

Pierre de la Tour, whose will has been quoted, "quarrelled with the Bishop about his *fiefs* at St. Nicholas and Zermatt, which the prelate claimed in default of *hommage;* and in 1351, along with some confederates, he took up arms against his spiritual superior. 'In the month of August, these Sons of Belial threw themselves upon the Bishop and his people, wounded them, killed a clerk and other persons, and pillaged upon several occasions the episcopal castles and lands.'" So said the sentence of excommunication which was pronounced against the *Seigneur* de la Tour and his accomplices. Pierre died a few years afterwards, and transmitted the quarrel as well as the property. Antoine de la Tour, who succeeded his father, also 'refused to pay homage for his *fiefs* in the Valley of St. Nicholas,'[4] and this led to war between the *Seigneur* and the Bishop,[5] which was carried on more or less continuously from 1362 to 1375.

During this strife an incident occurred which had particular interest for the inhabitants of the Valley of Zermatt. At that time, their former lords the Biandrates were represented by Isabelle, comptesse de Viège, and her son Antoine, compte de Biandrate. In 1365, while the quarrel between Antoine de la Tour and Bishop Tavelli was proceeding, Count Antoine and his mother let their castle at Viège to Pierre de Platea, and on November 3, to avoid

[1] "In primis animam meam Altissimo meo Creatori recommendo, etc. Et quia heredis institutio fundamentum et caput est totius testamenti, ideirco heredes mihi instituo Antonium, Johannem et Petrum, filios meos, pro equalibus portionibus, eo salvo quod dono et concedo dicto Antonio in avantagium, ultra portionem sibi competentem in bonis meis cum fratribus suis, castrum meum de Castellione una cum vallibus de Liech, de Schauson et de Praborny, cum pertinentiis et appendentiis omnibus dictorum locorum" [Gremaud, No. 1971].

There is another document in Gremaud [No. 2040] from which it appears that a certain John de Mont had rights or property in Zermatt in 1357.

[2] *Description du Département du Simplon, ou de la ci-devant République du Valais.* Par Mr. Schiner, Docteur en Médicine de la Faculté de Montpellier, 8vo, Sion, 1812, p. 278.

[3] The very first reference to them in Gremaud is in connection with some differences they had with the Abbey of St. Maurice, in 1158.

[4] *Le Vallais historique,* par l'Abbé B. Rameau, 4to, Sion, 1886, pp. 88-9.

[5] This bishop was Guichard Tavelli, who held the see from 1342 to 1375.

the dangers of war, went towards Brigue, intending to take refuge in their tower at Naters, close by; but at night-time, when near the bridge over the Rhone, they encountered some of the episcopal troops, who murdered both and flung them into the river.

This crime was so much talked about that the Pope sent his Legate to the Valais to open an enquiry and to punish the guilty; and a decree [Gremaud, No. 2107] was issued by him, ordering the Bishop to bring the murderers to justice, to recover the bodies of the victims and to inter them in the cathedral church in a manner befitting their rank; to found two chapels with two chaplains apiece for perpetual mass for the repose of their souls; and, further, that all their property which had been seized by the partizans of the Bishop was to be restored to the family. Some of it, it is said, went to a half-brother of Count Antoine, but the *fiefs* which were held from the Chapter of Sion were absorbed in the bishopric, and in course of time the Plateas of Viège (formerly vassals of the Biandrates) came into possession of part of them.[1]

The war still went on. The Bishop besieged Antoine de la Tour in his castle of Bas-Châtillon (or Niedergestelen) near Raron, and burned his villages. The Count of Savoy then intervened, and ordered the *Seigneur* to give the required homage, and condemned the Bishop to pay 16,000 francs for the damage he had done. Finally, five years later (Aug. 8, 1375), Antoine de la Tour put an end to his rival by hiring assassins; who, assisted by some of his own men, broke into the Bishop's castle of la Soie (near Sion) in the early morning, seized him and his Chaplain whilst they were walking in a garden which extended to the battlements of the ramparts, and hurled both over, on the side where the rocks beneath were perpendicular [Gremaud, No. 2165]. This, even in the fourteenth century, was a rough way of handling a bishop, and it was not approved by the people. The Valaisans rose against De la Tour, burned his castles and "rid the country for ever from this ambitious family."

The brothers Antoine and Jean de la Tour sold the castle of Châtillon and all their possessions in the Valais to the Count of Savoy. The deed recording this transaction is dated St. Maurice, August 8, 1376 [Gremaud, No. 2214].[2] The Count of Savoy, like a keen man of business, made sure of a *sale* before he effected the *purchase*. There is another deed in existence [Gremaud, No. 2212], dated at Turin, from which it appears that he sold the Castle and the Lötschen Thal to the new Bishop of Sion on *July* 9, 1376, for 40,000 golden florins; which, although a good round sum, was, as auctioneers would say, a ridiculously small and inadequate price for a domain of such extent.

But, although the Bishop made the purchase, it appears that he had still to get into possession, for there is a document dated Aug. 14, 1376, which sets forth that, having bought the Château of Châtillon, he promised full pardon *to those who still defended it* [Gremaud, No. 2215]. Wrangles went on between the Bishops of

[1] Quoted from Baron Gingins-la-Sarraz.

[2] This important document occupies twenty-two pages of print.

Sion and the Valaisans about the property of the De la Tours for more than fifty years. A good deal of it, including the district with which we are concerned, got in course of time into the hands of the Esperlinis (Asperlini), the De Plateas, and the De Werras. These families were important ones in the Upper Valais even when the De la Tours were at their greatest, and it was only in the natural order of things that some of the possessions of the *Seigneur* of Châtillon drifted into their nets. They all belonged to the neighbourhood of Visp (Viège)—a district which, according to Chanoine de Rivaz, 'historians agree is the cradle of the chief *noblesse* of the country.' Regarding these noble families Dr. Schiner says "their number was large, and their pride extreme; so much so that they built a church" [at Visp] "for their own especial use, namely that down below, in order that they should not mix with the populace, as they considered it too low a thing to assemble together in the house of God."

Ruden tells us (pp. 114, etc.) that several De Werras[1] are mentioned in a deed of 1435 as part lords of the vale of Zermatt. He says, also, it appears from a long roll of parchment, that three Esperlinis were lords of *half* the vale of Zermatt in 1448. In 1515, Johann Werra, of Leuk, bought the property of the Esperlinis, and then, in all, he had dominion over 115 families. These families, by a charter dated 1538, bought their freedom for the sum of 700 'Morserpfund' from the heirs of the said Werra; and on Jan. 25, 1540, the seniors assembled together in Zermatt Church to devise statutes for the future government of their community.

At the same period 'the noble Philip Perrini of Leuk' was lord of 35 families, and the De Plateas had 39 more. The Perrini men secured their freedom in 1562 by payment of 655 'Mörserpfund,' but their friends and relatives under the Plateas remained serfs until 1618, when they delivered themselves from bondage for the sum of 450 'Mörserpfund' and *four fat sheep!*[2] "With what burning desire," says Ruden, "must they have longed for the freedom which their brothers had so long enjoyed." Three years later, "still intoxicated with joy," the heads of these families met to arrange their affairs upon the same footing as the others; but it would seem, from subsequent passages in Ruden, that the whole were not fused into a single commune until the year 1791.

It may be inferred, from the considerable number of persons who were living at Zermatt during the periods referred to by Ruden, that the conditions of life there were not much harder in those early times than they are now, and this although the people of the Valais

[1] The name of Willermus Werra appears in the Cremaud documents as early as the year 1247 [No. 507]. Petrus de Platea de Ueshia is in one of 1255 [No. 625].

[2] Ruden gives the names and abodes of those who were freed upon these three occasions, and from his lists it appears that those who were enfranchised belonged strictly to Zermatt and its surroundings, and not to places lower down the valley. The total number of families (or households) amounts to 189. If there were no more than four persons to a household, the population of Zermatt three centuries ago must have been considerably larger than it is now. The list of those who were freed in 1538 contains names which will be familiar to visitors to Zermatt,—such as Perren, Ruden, and Weltschen.

were more or less in a state of bondage.[1] Yet, even when in bondage, they had rights of some sort,[2] though no political influence. All power then was in the hands of the Bishops of Sion and the *Seigneurs*, whose relations to each other were somewhat complex. A student of the early history of the Valais may be excused if he does not comprehend the precise relations which existed between the Bishops and the *Seigneurs*, and their serfs or vassals, as it is abundantly clear that the Valaisans did not understand them themselves. The history of their country in medieval times is principally composed of records of interminable disputes and petty warfare, arising from differences about rights which were or were not possessed. The Abbé Gremaud, in speaking of these contests, divides them into three groups. There were 1. The wars between the lord paramount and his vassals. 2. Little private wars between individual lords, and 3. others between the lords and the communes.

One can hardly tell what the Valais should be called during these times. It was neither Kingdom nor County, Empire or Republic. Gingins-la-Sarraz terms it a principality, and says—

"La principauté temporelle des évêques de Sion se composa dans l'origine d'un assemblage de diverses possessions féodales éparses tant dans le Haut-Vallais que dans le Bas; mais, loin de former entr'elles un territoire arrondi et compacte, ces propriétés seigneuriales se trouvaient, au contraire, séparées les unes des autres et entrecoupées par les fiefs dépendants médiatement ou immédiatement de la maison de Savoie, qui possédait des seigneuries importantes non-seulement dans les quartiers inférieurs, mais aussi dans les régions supérieures de la longue vallée du Rhône."

How the Counts of Savoy became masters of this part of the Valais, says the Abbé Gremaud, is unknown; and he makes the same confession in respect to the origin of the Bishopric. From the 12th to the 15th centuries, the Bishops of Sion were very important personages, who declared war on their own account, and exercised sovereign powers, with little to check their authority and pretensions. Down to the end of the 14th century they were not drawn exclusively from the Valais. Several were Vaudois, and others were Genevese or French, or came from the Valley of Aosta; but for the last 500 years nearly all have been people of the country, and some have sprung from a very low origin.[3] The right of the Chapter to

[1] In feudal times they were bought and sold, and transferred with the land. Thus, in 1257 Guillaume de Mœrell sold his men in the valley of the Simplon to Jocelin, vidomne of Sion [Gremaud, No. 638]. In 1279, Guillaume de Scala of Brigue sold three men to Pierre de Louèche, Canon of Sion [Gremaud, No. 880]. In 1280, Jean de Miège sold a man to Jacques, Canon of Sion [Gremaud, No. 886]. In 1292, Nantelme d'Ayent sold to the Chapter of Sion some men and his rights in the Val d'Hérens [Gremaud, No. 1110]. In 1358, Jean, *seigneur* of Anniviers, sold some '*taillable*' men to Tavelli, Bishop of Sion [Gremaud, No. 2046]; and, in 1408, Antoine de la Rochiz sold men to Perret de la Chapelle [Gremaud, No. 2587].

[2] Ruden says [p. 122] that Jodok Kalbermatter of Visp bought a portion of the Platen property at Zermatt in 1528, and upon May 10 met his purchased vassals in the Church, to receive their submission and oath of fidelity, and in return promised not to curtail their *rights and privileges*.

[3] England has been visited by two Bishops of Sion. Ermanfroid, who held the see from 1055 to 1082, came as Pope's Legate in 1070, and presided at the Council at Windsor when Stigand, Archbishop of Canterbury, was deposed; and Cardinal Schiner (nominal bishop from 1499 to 1522) came to London in the reign of Henry VIII.

elect the Bishop was sometimes upset by the Pope, and the people had no voice in the matter until recent times. The disputes which recurred upon this subject were only terminated in 1807; and now, when a vacancy occurs, the Chapter selects four Canons, from whom the Bishop is chosen by the *Grand Conseil* of the Canton. The election is confirmed by the Pope.

After the end of the fourteenth century, the power of the great lords was gradually shorn and shattered, the privileges of the Bishop were curtailed, and in course of time the people acquired the management of their own affairs and a voice in the election of their rulers. It took much to rouse them to action against their spiritual chiefs. Valaisans have always been good Catholics. "How blessed it is," said the mother of Thomas Platter, "to be the mother of a priest"; and this feeling, to which she gave expression four centuries ago, exists amongst the people of the Valais at the present time. But there are some things which flesh and blood cannot endure. While it is annoying to be frequently menaced with eternal damnation, it is more than aggravating, when you bring a basket of trout to market, to have the biggest picked out for your Bishop, the next best by his Vice-lord (*vidomne*), and to have only the refuse left for sale; and, it may be, the revolt of the Valaisans against the authority of their Bishops, and against the *Seigneurs*, was more stimulated by a desire to rid themselves from such petty oppressions than by a wish to found a model Republic, or from a profound belief that all men are born free and equal. Sometimes they chased their Bishops from the diocese. They shut one up, and kept him a prisoner, refusing to release him until he had assented to their demands; and another (who is said to have been remarkable for his learning and eloquence) was told to his face "We are a free people. Understand that if the Bishops of Sion have exercised sovereign powers they have done it simply through our good-nature. . . As you will not sign, we are off at once; and we will go from *dizain* to *dizain*, to tell the people. . . Don't mistake, they will rise in fury, and will destroy your *châteaux*, and you will learn from experience that you would have done better to have paid attention to our wishes."

In 1628 (ten years after the Zermatters had freed themselves from their lords) the Valais was first termed a Republic, and for some length of time afterwards the country enjoyed comparative repose. The condition of affairs towards the end of the 18th century was thus described by M. de Bourrit.[1]

"The confederation is made up of seven little republics, called *Dixains*,[2] and at different times each one of them has contracted its own particular alliances; but they felt that unity was strength, and could only bring about

[1] *Description des Alpes Pennines et Rhetiennes*, par M. T. Bourrit, 8vo, Geneva, 1781; vol. i, pp. 105-6.

[2] Schiner (*Description du Département*, p. 9) says, the Upper Valais was divided into seven districts "which the Valaisans called *Disains* or *Dixains*, in Latin *Decani*, and in German *Zenden*. One does not know the origin of this term. However, it cannot be derived from the word *ten*, as there are only seven and not ten." The Abbé Gremaud (vol. v, pp. lxxvi-ii) adopts a different view. This author says that the term *dizain* was first employed in 1417.

unity by a well-considered confederation. The *Dizains* appoint the Bishop to preside over their assemblies. This is not altogether a voluntary choice; but exhausted by long troubles they could only terminate them by associating the Bishop with the Government. . . To-day he is called Prince. He has the right to strike money in certain cases, and to pardon. . . The election of a Bishop is a matter of importance."

and he then went on to shew how it was managed at that time.

Bourrit (writing in 1781) spoke favourably of the Valaisans, particularly of those in the neighbourhood of Visp. "One finds there," he said, "an enchanting openness and sweetness of character. . . The children seemed to us to be the most beautiful in the Valais; they followed us in troops, from house to house, with a familiarity to which we were not quite accustomed. . . We were very much surprised that they refused some money which we offered to them. . . This corner of the world seemed to possess all that could contribute to render life happy." But it would appear that this pastoral simplicity and almost angelic condition did not prevail universally, and he rather spoiled his picture by mentioning upon an earlier page that he found himself "by the side of a gibbet, having bits of corpses fastened to it, -heads and limbs being nailed up. This horrible sight, which we came upon unexpectedly, *is very common throughout the Valais*, where justice is severe- where they hang a man for robberies which elsewhere are punished at the most with a whipping."

'This corner of the world,' a few years later, was again the theatre of sanguinary and barbarous scenes. The Republicans of the Upper Valais did not regard favourably the advances which were made upon them by the French Republic in 1799; and, when fortune temporarily favoured their arms, took the opportunity to bury a French officer to the waist, and to stone him to death. "Quelques jours auparavant, trois Vaudois surpris pillant l'église de ce premier village" [Varone] "avaient eu le crâne fracassé sur l'enclume d'une forge."[1] These barbarities appear to have caused the reprisals which a few months later were made in the Valley of Zermatt and elsewhere.

From 1802 to 1810 the Valais formed an independent Republic; and after that, for a short time, Zermatt became part of the French Empire. The *Moniteur*, one morning in 1810, contained the following decree.

"Napoleon, etc., considering that the route over the Simplon, which unites the empire with our kingdom of Italy, is useful to more than sixty millions of persons, that it has cost France and Italy more than eighteen millions, an expenditure which would become useless unless commerce could be carried on conveniently and in perfect safety; that the Vallais has not kept any of the engagements which it entered into when we commenced the works of this great line of communication, wishing also to put an end to the anarchy which afflicts the country, and to cut short the pretensions of one part of the population to sovereignty over the other, let it be decreed as follows. Art. I. The Vallais is united to the Empire. Art. II. The territory shall form a department under the title the *Département du Simplon*."

The Valais was incorporated forthwith, and remained a Department

[1] Both these statements are taken from Hilaire Gay's *Histoire du Vallais*, vol. ii,

of the French Empire for about three years. After the battle of Leipzig the allies speedily penetrated into Switzerland; and, on Dec. 24, 1813, the Préfet of the Département du Simplon, learning of their approach, made himself scarce, and went off in hot haste to Chambery with all the cash, leaving his guns behind him. A provisional Government for the Valais was established shortly afterwards, and on Sept. 12, 1814, "it was received, as the twentieth Canton, into the bosom of the Swiss Confederation."[1]

Down to the end of the 18th century Zermatt was not much visited by strangers. To *gens du pays*, however, it must have been a well-known place. So long back as 1414, Guichard de Rarogne dated a proclamation from Zermatt (Pratoborno),[2] which he would not have done if the name had been unfamiliar to those he addressed; and in 1364 and 1428 Zermatt paid Peter's Pence [Gremaud, Nos. 2090 and 2784], and may therefore have been heard of at Rome. To some extent, at least, it was known to the outer world. When De Saussure went there in 1789 he clearly had obtained some previous knowledge of the place. He was led to believe in the Val d'Ayas that he would be able to get from St. Jacques to Zermatt in a day—a fair day's work at the present time; and, although he did not accomplish this (being compelled by bad weather to make for Breuil), he actually took mules across from Breuil to Zermatt, and this seems to have been an ordinary proceeding at that time, although it is not now. His reception at Zermatt was somewhat frigid. There was no inn, and he says that the *cabaretiers* were either away or refused to take him in, and that the *Curé* declined to sell him anything. The first Englishman who is known to have visited Zermatt fared better.

Mr. George Cade, a native of York, passed that way in 1800.[3] The people flocked together in the Val Tournanche to regard the novel spectacle, and when he crossed into Switzerland the *Curé* of St. Nicholas told him that he had *never before seen an Englishman*. Mr. Cade left Chamonix at the beginning of Sept. 1800, accompanied by the Marie Coutet (Couttet) who had been guide to De Saussure in 1789, and in earlier years. They crossed the Great St. Bernard together, went up the Val Tournanche, and over the Theodul Pass to Zermatt, and thence to Visp and down the Rhone Valley. In connection with the Val Tournanche, Mr. Cade refers to a man named Erin, who was said to be 'the best guide in the country.' He accompanied them to the top of the Theodul, whence he was sent back. 'He went whistling away . . . without pikes or precaution.' This would appear to be the same Jean-Baptiste Erin who had conducted De Saussure, and, as it is stated that he was a *guide*, one may presume that travellers or tourists were not altogether unknown. But

[1] *Histoire du Vallais depuis les temps les plus anciens jusqu'à nos jours*, par Hilaire Gay, 8vo, Geneva and Paris, 1889, vol. ii, pp. 124-6, 129.

[2] Ordering the men of Loueche and elsewhere to guard the passes against the Bernese [Gremaud, No. 2623].

[3] In the *Alpine Journal*, vol. vii, pp. 431-436, the Rev. J. Sowerby drew attention to a manuscript account of Mr. Cade's journey, and printed a portion of it. By the favour of its present owner, I have been permitted to examine this manuscript, and to make the extracts which are given.

Mr. Cade says that since the journey of De Saussure 'no attempts have been made to cross this famous passage' (the Theodul Pass), though he observes shortly afterwards

"that there is still some commerce carried on through this pass . . . which is probably the highest in the world for any man or animal. . . Nine mules had made the ascent this year. . . It is not uncommon for the passage to be shut up the whole year. Indeed the mules never cross from one side to the other if they sink much in the snow, or suffer from the rarefaction of the air. They are immediately unloaded, and the muleteers make shift themselves to transport their merchandize; otherwise, they proceed slowly to the Col, deposit their goods there and retire, either unloaded or in charge of articles left there perhaps several weeks before, purposely for them. Thus the Vallaisans send iron into Piedmont, and receive in exchange different wines."

His experience at Zermatt is thus described. "They addressed us in High Dutch, too high indeed for our weak understandings," but the Curé behaved well, and sent a message that he "wished for nothing so much as to be of service," and in the evening they had a chat.

"The conversation grew spirited. Politics were soon introduced by a detail of the entry of the French in the Valley of St. Nicholas: but why retrace the crimes with which it was accompanied, the violation of Wives and Virgins! Children, like the old, were murdered without mercy. . . When the enemy reached Zermatt the same cruelties were repeated, with an extortion of 500,000 livres. Meanwhile our host, this excellent old man, was bound, and a poignard was held at his breast till the demand was exacted.[1] The brave and generous villagers sacrificed everything for their Priest."

During the first half of the nineteenth century Zermatt was not unfrequently visited both by Swiss and strangers,[2] but the total number per annum was inconsiderable. This may be inferred from the slight notice bestowed upon it in "*The Traveller's Guide through Switzerland*, by Mr. J. G. Ebel, a new edition, arranged and improved by Daniel Wall," London, 1818, which was one of the earliest guide-books to Switzerland published in English.[3] The first edition of Murray's *Handbook for Travellers in Switzerland and the Alps of Savoy and Piedmont*, published in 1838, devotes, however, several pages to the Valleys of Saas and Zermatt; and from the details which are given, it seems that the district was becoming somewhat more visited, though, at that time, there was still no inn at Zermatt.

"The house of the curé offers its hospitalities, and a worthier host than Jean François de la Costa cannot be found. In the little plain of Zermatt, situated amidst the grandest scenery of nature, surrounded by forests of pines

[1] These appear to have been reprisals for the barbarities mentioned on p. 12.

[2] Amongst the better-known persons who went there may be mentioned W. Brockedon, the Artist (1825); Elie de Beaumont (1834); Engelhardt (1835); Desor and Studer (1839); Agassiz, Charpentier and Topffer (1840); J. D. Forbes (1841); John Ball (1845); and John Ruskin (1849).

Charpentier said in his *Essai sur les Glaciers et sur le terrain erratique du Bassin du Rhone*, p. 59 (published in 1841) that the Zermatt district "rarement visitée jusqu'à present, est peu connue."

[3] It said, "A place which may perhaps interest the tourist is the VALLEY OF PRABORGNE, which communicates with that of St. Nicholas. It is bounded by enormous glaciers, which descend to the bottom of the valley. The village of Praborgne is very lofty: it overlooks these glaciers from an immense height." It seems that the writer of this paragraph had not been on the spot, and he appears to be doubtful whether the tourist *would* be interested.

and vast glaciers, is placed, with its neat church, this elevated and retired village, with more cleanness and comfort among its inhabitants than is to be found in many places of greater pretensions: this has perhaps been effected by the influx of strangers, for many mineralogists, botanists, and entomologists, come here to collect rich harvests in the neighbourhood."

Until 1852, the only hotel at Zermatt was a little inn kept by the village doctor (Lauber), which was started in 1839. Though small and humble, it was sufficient for the wants of the place.[1] In 1852, the Hotel du Mont Cervin was opened, at what was then the northern end of the village.[2] In 1854, the Lauber inn was acquired by Mons. Alexandre Seiler, who christened it Hotel du Mont Rose. M. Seiler understood the art of inn-keeping. He knew how to welcome the coming and to speed the parting guest; and admirably seconded by his estimable wife, he soon made a name for the Mont Rose. There was no need to advertise the house by the ordinary methods, for it was advertised sufficiently by its *clientèle*. If anyone enquired What is the best hotel in Zermatt? or Where shall we go? the answer was 'Go to the Monte Rosa,' or 'Go to Seiler's.' Success, however, was not immediate. In the first years that he kept the house, the total number of visitors amounted to about eighty per annum. Perhaps as many more, or a slightly larger number, patronised the Hotel du Mont Cervin, but this hotel was not popular and was never full, and people used to leave it to come to the Mont Rose.



ALEXANDRE SEILER I.

Nearly simultaneously with the foundation of the latter hotel, the outburst of British energy occurred which led to the subjugation of all the High Alps around Zermatt. Down to 1853, the Breithorn was the only one of the great peaks in this district which had been ascended. Between 1854 and 1865 all of the rest were conquered. The ball, so to speak, was opened by the three brothers Smyth, —gentlemen who, happily, are all still alive. In 1854, Captain (now Colonel) Edmund Smyth, the Rev. Christopher Smyth, and the Rev. (now Canon) J. G. Smyth,[3] made the first ascent of the Strahlhorn

[1] The Lauber inn is incorporated in the present Monte Rosa Hotel, and forms part of its southern end. It had apparently, only one story, and a very narrow frontage to 'the street.' The bureau of the present hotel, the smoking-room, and the rooms above, belonged to the original building.

[2] The original Mont Cervin Hotel was scarcely a quarter of the size of the present hotel of that name, in which it is now incorporated.

[3] All three of the Smyths were climbers in the days of their youth. Canon Smyth when at Westminster is said to have clambered up by the School to the top of the Chapter House, where, finding a ladder, he was enabled to continue his explorations as far as the clock in the West Tower! Col. Smyth is 'Crab Jones.' Don't you know Crab Jones? "Here he comes, sauntering along with a straw in his mouth, the queerest, coolest fish in Rugby. If he were tumbled into the moon this minute, he would just pick himself up without taking his hands out of his pockets or turning a hair."—*Tom Brown's School-Days.* When Capt. Smyth went to the Himalayas, the natives used to



HOTEL DU MONT ROSE, ZERMATT.

from the Adler Pass, and they then turned their attention to Monte Rosa. The first ascent of the highest mountain in Switzerland (the second in elevation in the Alps) might have been expected to have received a good deal of attention. The comparatively small notice that has been given to it has been due, I think, to the fact that no adequate account of the expedition has been published.[1]

These two ascents were quickly followed by those of the other mountains which are enumerated in the accompanying Table. The number of visitors to Zermatt increased rapidly during this period, though all who came could still be accommodated in the two hotels. After 1865, there was a notable augmentation in numbers, which was due to the publicity given by the *Times* newspaper to an account of the first ascent of the Matterhorn. From this relation, which was reprinted throughout the world, millions of people heard the names of Zermatt and the Matterhorn for the first time. The Monte Rosa Hotel benefited most from this, and in 1867 Mons. Seiler was able to make himself master of *both* hotels, and under his able management the 'Mont Cervin lost its old reputation. The large building called the Hotel Zermatt was erected by the Commune, but it now forms part of the Seiler Hotels; and in 1884 the great establishment at the Riffelalp was opened by the enterprise of Alexandre Seiler I. No one who knows the facts will dispute that the capacity and tact with which he directed his affairs, the geniality with which he received his patrons, and the kindliness which he and his esteemed wife extended to all who were in difficulty, had much to do with the development of the place, and that they occupy a very prominent position amongst the makers of Zermatt.

say 'he could climb where birds could not fly,'—which is an Oriental equivalent for 'Monsieur has the agility of a chamois!'

[1] A reference to, rather than an account of it was published in the 2nd ed. of the book entitled *Where there's a Will there's a Way*, 8vo, London, 1856, and some notice of it was taken in the *Illustrated London News*, and in a Norfolk newspaper; but with these exceptions nothing of the nature of an account has, I believe, been published of the first ascent of Monte Rosa.



First Ascents of the principal Peaks in the Zermatt District, arranged in Chronological Order.

Year.	Name of Peak.	Height in Feet.	First Ascent made by
1854	Strahlhorn .	13,750	Rev. Christopher Smyth, Capt. Edmund Smyth, and Rev. J. Grenville Smyth, with — Andermatten of Saas.
1855	Monte Rosa, highest point	15,217	Mr. J. Birkbeck, Rev. Charles Hudson, Rev. Christopher Smyth, Rev. J. Grenville Smyth, and Rev. E. Stevenson, with Ulrich Lauener, Johann and Mathias zum Taugwald.
1856	Allalinhorn .	13,235	Mr. E. L. Ames, with Franz Andermatten and — Imseng of Saas.
1858	Dom . . .	14,941	Rev. J. Llewelyn Davies, with Johann zum Taugwald, Johann Kronig of Zermatt, and Joseph Schwarzen of Randa.
1859	Rimpfischhorn .	13,790	Rev. Leslie Stephen and Dr. R. Liveing, with Melchior Anderegg and Johann zum Taugwald.
1860	Alphubel . .	13,803	Rev. Leslie Stephen, with Melchior Anderegg.
1861	Lyskamm . .	14,889	Mr. W. E. Hall, Rev. J. F. Hardy, Mr. J. A. Hudson, Mr. C. H. Pilkington, Prof. Ramsay, Mr. T. Rennison, Dr. Sibson, Mr. R. Stephenson, with J. P. Cachat, Franz Lochmatter, Peter Perrn, J. M. Perrn, and Stephan zum Taugwald.
,,	Weisshorn . .	14,803	Dr. John Tyndall, with J. J. Bennen and Ulrich Wenger.
,,	Castor . .	13,878	Mr. William Mathews and Mr. F. W. Jacomb, with Michel Croz and Jean-Baptiste Croz.
,,	Nord End, Monte Rosa	15,132	Mr. E. N. Buxton, Sir T. Fowell Buxton, and Mr. J. J. Cowell, with Michel Payot and other guides.
1862	Dent Blanche .	14,318	Mr. T. S. Kennedy and Mr. Wigram, with Jean-Baptiste Croz and Johann Kronig.
,,	Täschhorn . .	14,757	Rev. J. Llewelyn Davies and Rev. J. H. Hayward, with Johann and Stephan zum Taugwald.
1861	Pollux . .	13,432	Mons. Jacot, with ?
,,	Rothhorn (Moming)	13,855	Mr. F. Cranfurd Grove and Rev. Leslie Stephen, with Melchior Anderegg and Jakob Anderegg.
1865	Ober Gabelhorn	13,363	Mr. A. W. Moore and Mr. Horace Walker, with Jakob Anderegg
,,	Matterhorn .	14,705	Lord Francis Douglas, Mr. Hadow, Rev. Charles Hudson, and Edward Whymper, with Michel Croz, Peter Taugwalder *père*, and Peter Taugwalder *fils*.

CHAPTER II.

UPON SOME ATTEMPTS TO ASCEND THE MATTERHORN.

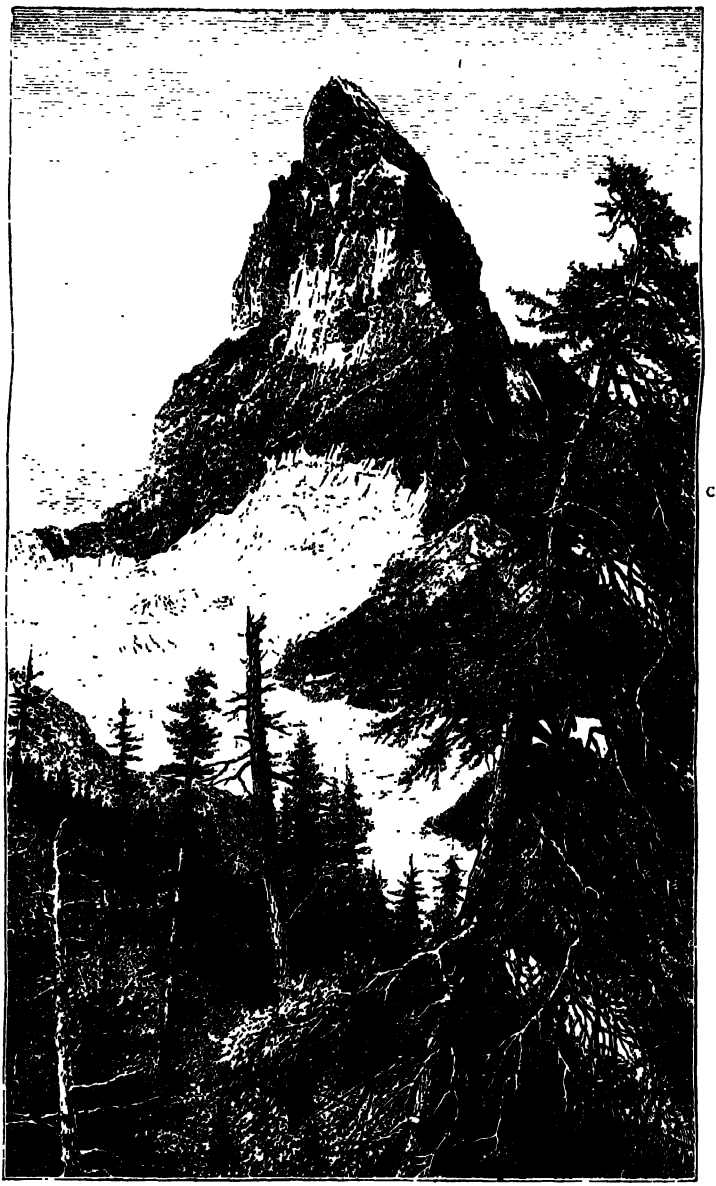
ATTEMPTS BY THE CHASSEURS OF VAL TOURNANCHE (1858-9)—MESSRS. PARKER IN 1860—MR. VAUGHAN HAWKINS IN 1860—SECOND ATTEMPT BY MESSRS. PARKER IN 1861—MY FIRST NIGHT ON THE MATTERHORN (1861)—CAMP ON THE COL DU LION—WINTER ATTEMPT BY MR. T. S. KENNEDY IN 1862—RENEWED ATTACKS WITH MR. R. J. S. MACDONALD—A SOLITARY SCRAMBLE ON THE MATTERHORN—A NIGHT ALONE—A TUMBLE—MY FIFTH AND SIXTH ATTEMPTS IN 1862—PROFESSOR TYNDALL REACHES 'THE SHOULDER'—MY SEVENTH ATTEMPT (1863)—ABANDONMENT OF THE SOUTH-WEST RIDGE—MY EIGHTH ATTEMPT (1865)—BAMBOOZLED AND HUMBUGGED—A FLANK MARCH.

THE name of Zermatt is inseparably connected with that of the Matterhorn. This grand mountain, though not the loftiest of its district,[1] is *the* peak above all others that people wish to see. Train-loads of tourists pass the Weisshorn daily without emotion, but they raise a cheer when Mont Cervin comes in sight.

Most tourists obtain their first view of the mountain either from the valley of Zermatt or from that of Tournanche. From the former direction the base of the mountain is seen at its narrowest, and its ridges and faces seem to be prodigiously steep. The view of the mountain from Breuil, in the Val Tournanche, is scarcely less striking than that on the other side; but it perhaps makes less impression, because the spectator grows accustomed to the sight while coming up the valley. From this direction the mountain is seen to be broken up into a series of pyramidal wedge-shaped masses. It was natural to suppose that a way would more readily be found to the summit on a side thus broken up than in any other direction. The eastern face, fronting the Riffel, seemed one smooth, inaccessible cliff, from summit to base. The ghastly precipices which face the Z'Mutt Glacier forbade any attempt in *that* direction. There remained only the side of Val Tournanche; and it will be found that nearly all the earliest attempts to ascend the mountain were made upon that side.

The first efforts to ascend the Matterhorn of which I have heard were made in the years 1858-9, from the direction of Breuil, by some chasseurs of the Val Tournanche. The highest point that was attained was about as far as the place which is now called the 'Chimney'

[1] It is exceeded in elevation by Monte Rosa, the two highest points of the Mischabelhorner, the Lyskamm, and the Weisshorn.



THE MATTERHORN, FROM THE RIFFELBERG.

(cheminée), a height of about 12,650 feet. Those who were concerned in these expeditions were Jean-Antoine Carrel, Jean-Jacques Carrel, Victor Carrel, the Abbé Gorret, and Gabrielle Maquignaz.[1]

Attempt by Messrs. Parker (1860).—The next attempt was made by the Messrs. Alfred, Charles, and Sandbach Parker, of Liverpool, in July 1860. These gentlemen, without guides, endeavoured to storm the peak by attacking its eastern face. The brothers went along the ridge between the Hörnli and the peak until they came to the point where the ascending angle is considerably increased. This place is marked on Dufour's map of Switzerland 3298 mètres (10,820 feet). They were then obliged to bear a little to the left to get on to the face of the mountain; and, afterwards, they turned to the right, and ascended about 700 feet higher, keeping as nearly as was practicable to the crest of the ridge, but, occasionally, bearing a little to the left —that is, more on to the face of the mountain. Clouds, a high wind, and want of time, were the causes which prevented them from going farther. Their highest point was under 12,000 feet.

Attempt by Mr. Vaughan Hawkins (1860).—Another attempt to ascend the mountain was made towards the end of August 1860, by Mr. Vaughan Hawkins, from the side of the Val Tournanche. Mr. Hawkins inspected the Matterhorn in 1859, with the guide J. J. Bennen, and formed the opinion that the south-west ridge[2] would lead to the summit. He engaged J.-Jacques Carrel, who was concerned in the first attempts, and, accompanied by Bennen (and by Professor Tyndall, whom he had invited to take part in the expedition), he started for the gap between the little and the great peak.[3]

Mr. Hawkins' party, led by Bennen, climbed the rocks abutting against the Couloir du Lion, on its south side, and attained the Col du Lion, although not without difficulty. They then followed the south-west ridge, passed the place at which the earliest explorers had turned back (the Chimney), and ascended about 300 feet more. Mr. Hawkins and J.-J. Carrel then stopped, but Bennen and Professor Tyndall mounted a few feet higher. They retreated, however, in less than half-an-hour, finding that time ran short; and, descending to the Col by the same route as they had followed on the ascent, proceeded thence to Breuil, down the Couloir instead of by the rocks. The point at which Mr. Hawkins stopped is easily identified from his description. Its height is about 12,990 feet above the sea. Bennen and Tyndall could not have ascended more than 50 or 60 feet beyond this in the few minutes they were absent from the others, as they were upon one of the most difficult parts of the mountain. This party therefore accomplished an advance of about 350 or 400 feet.

[1] Gabrielle Maquignaz is still alive, and is proprietor of the Hotel des Jumeaux at Breuil.

[2] This ridge is seen on the left of the engraving upon page 29; and if the reader consults this view, the explanatory outlines, and the maps, he will be able to form a fair idea of the points which were attained on this and upon the subsequent attempts.

[3] Since this time the small peak has received the name Tête du Lion. The gap is now called the Col du Lion; the glacier at its base, the Glacier du Lion; and the gully which connects the Col with the glacier, the Couloir du Lion.

Second Attempt by Messrs. Parker (1861). Mr. Hawkins did not try again, and the next attempt was made by the Messrs. Parker, in July 1861. They again started from Zerfnatt; followed the route they had struck out on the previous year, and got a little higher than before; but they were defeated by want of time, shortly afterwards left Zermatt on account of bad weather, and did not again renew their efforts. Mr. Parker said—"In neither case did we go as high as we could. At the point where we turned we saw our way for a few hundred feet farther; but, beyond that, the difficulties seemed to increase." I am informed that both attempts should be considered as excursions undertaken with the view of ascertaining whether there was any encouragement to make a more deliberate attack on the north-east side.

My first night on the Matterhorn (1861). I arrived at Breuil on the 28th of August 1861, with an Oberland guide, and found that Professor Tyndall had been there a day or two before, but had done nothing. On the way up we enquired for another man of all the knowing ones, and they, with one voice, proclaimed that Jean-Antoine Carrel, of the village of Val Tournanche, was the cock of the valley. We sought, of course, for Carrel; and found him a well-made, resolute-looking fellow, with a certain defiant air which was rather taking. Yes, he would go. Twenty francs a-day, whatever was the result, was his price. I assented. But I must take his comrade. "Why so?" Oh, it was impossible to get along without another man. As he said this an evil countenance came forth out of the darkness and proclaimed itself the comrade. I demurred, and the negotiations broke off.

I had seen the mountain from nearly every direction, and an ascent of it seemed much more than was likely to be accomplished in twenty-four hours. I intended to sleep out upon it, as high as possible, and to attempt to reach the summit on the following day. At Breuil, we endeavoured to induce another man to accompany us, but without success. Mathias zum Taugwald and other well-known guides were there at the time, but they declined to go on any account. A sturdy old fellow—Peter Taugwalder by name—said he would go! His price? "Two hundred francs." "What, whether we ascend or not?" "Yes- nothing less." The end of the matter was, that all the men who were more or less capable shewed a strong disinclination, or positively refused to go (their disinclination being very much in proportion to their capacity), or else asked a prohibitive price. This, it may be said once for all, was the reason why so many futile attempts were made upon the Matterhorn. One guide after another was brought up to the mountain, and patted on the back, but all declined the business. The men who went had no heart in the matter, and took the first opportunity to turn back.[1] For they were, with the exception of the man to whom reference will be made presently, universally impressed with the belief that the summit was entirely inaccessible.

[1] The guide Bennen must be excepted.

We resolved to go alone, and anticipating a cold bivouac, begged the loan of a couple of blankets from the innkeeper. He refused them; giving the curious reason, that we had bought a bottle of brandy at Val Tournanche, and had not bought any from him! No brandy, no blankets, appeared to be his rule. We did not require them that night, as it was passed in the highest cow-shed in the valley, which is about an hour nearer to the mountain than the hotel. The cowherds, good fellows, seldom troubled by tourists, hailed our company with delight, and did their best to make us comfortable; brought out their little stores of simple food, and, as we sat with them round the great copper pot which hung over the fire, bade us in husky voice, though with honest intent, to beware of the perils of the haunted cliffs. When night was coming on, we saw, stealing up the hill-side, the forms of Jean-Antoine Carrel and the comrade. "Oh ho!" I said, "you have repented?" "Not at all; you deceive yourself." "Why then have you come here?" "Because we ourselves are going on the mountain to-morrow." "Oh, then it is *not* necessary to have more than three." "Not for *us*." I admired their pluck, and had a strong inclination to engage the pair; but, finally, decided against it. The *comrade* turned out to be the J.-J. Carrel who had been with Mr. Hawkins, and was nearly related to the other man. Both were bold mountaineers; but Jean-Antoine was incomparably the better man of the two, and was the finest rock-climber I have ever seen. He was the only man who persistently refused to accept defeat, and who continued to believe, in spite of all discouragements, that the great mountain was not inaccessible, and that it could be ascended from the side of his native valley.

The night wore away without any excitement. The two Carrels crept noiselessly out before daybreak, and went off. We did not leave until nearly seven o'clock, and followed them leisurely, leaving all our properties in the cow-shed; sauntered over the gentian-studded slopes which intervene between the shed and the Glacier du Lion, left cows and their pastures behind, traversed the stony wastes, and arrived at the ice. Old beds of hard snow lay on its right bank (our left hand), and we mounted over them on to the lower portion of the glacier with ease. But, as we ascended, crevasses became numerous, and we were at last brought to a halt by some which were of very large dimensions; and, as our cutting powers were limited, we sought an easier route, and turned, naturally, to the lower rocks of the Tête du Lion, which overlook the glacier on its west. Some good scrambling took us in a short time on to the crest of the ridge which descends towards the south; and thence, up to the level of the Col du Lion, there was a long natural staircase, on which it was seldom necessary to use the hands. I dubbed the place 'The Great Staircase.' Then the cliffs of the Tête du Lion, which rise above the Couloir, had to be skirted. This part varies considerably in different seasons, and in 1861 we found it difficult; for the fine weather of that year had reduced the snow-beds abutting against it to a lower level than usual, and the rocks

which were left exposed at the junction of the snow with the cliffs had few ledges or cracks to which we could hold. But by half-past



THE COL DU LION; LOOKING TOWARDS THE TÊTE DU LION.

ten o'clock we stood on the Col, and looked down upon the magnificent basin out of which the Z'Mutt Glacier flows. We decided to pass the night upon the Col, for we were charmed with the capabilities of the place, although it was one where liberties could not be taken. On one side a sheer wall overhung the Tiefenmatten

Glacier. On the other, steep, glassy slopes of hard snow descended to the Glacier du Lion, furrowed by water and by falling stones. On the north there was the great peak of the Matterhorn,[1] and on the south the cliffs of the Tête du Lion. Throw a bottle down to the Tiefenmatten—no sound returns for several seconds.

* * * 'how fearful
And dizzy 'tis, to cast one's eyes so low!"

But no harm could come from that side. Neither could it from the other. Nor was it likely that it would from the Tête du Lion, for some jutting ledges conveniently overhung our proposed resting-place. We waited for a while, basked in the sunshine, and watched or listened to the Carrels, who were sometimes seen or heard, high above us, upon the ridge leading towards the summit; and, leaving at midday, we descended to the cow-shed, packed up the tent and other properties, and returned to the Col, although heavily laden, before six o'clock. This tent was not a success. It looked very pretty when set up in London, but it proved thoroughly useless in the Alps. It was made of light canvas, and opened like a book; had one end closed permanently and the other with flaps; it was supported by two alpenstocks, and had the canvas sides prolonged so as to turn in underneath. Numerous cords were sewn to the lower edges, to which stones were to be attached; but the main fastenings were by a cord which passed underneath the ridge and through iron rings screwed into the tops of the alpenstocks, and were secured by pegs. The wind, which playfully careered about the surrounding cliffs, was driven through our gap as through a blow-pipe; the flaps of the tent would not keep down, the pegs would not stay in, and it exhibited so marked a desire to go to the top of the Dent Blanche, that we thought it prudent to take it down and sit upon it. When night came on we wrapped ourselves in it, and made our camp as comfortable as the circumstances would allow. The silence was impressive. No living thing was near our solitary bivouac; the Carrels had turned back and were out of hearing; the stones had ceased to fall, and the trickling water to murmur.

It was bitterly cold. Water froze hard in a bottle under my head. Not surprising, as we were actually on snow, and in a position where the slightest wind was at once felt. For a time we dozed, but about midnight there came from high aloft a tremendous explosion, followed by a second of dead quiet. A great mass of rock had split off, and was descending towards us. My guide started up, wrung his hands, and exclaimed, "O my God, we are lost!" We heard it coming, mass after mass pouring over the precipices, bounding and rebounding from cliff to cliff, and the great rocks in advance smiting one another. They seemed to be close, although they were probably distant, but some small fragments, which dropped upon us at the same time from the ledges just above, added to the alarm.

We put ourselves in motion at daybreak, and commenced the

[1] The engraving is made after a sketch taken from the rocks of the Matterhorn, just above the Col.

ascent of the south-west ridge. There was no more sauntering with hands in the pockets,—each step had to be earned by downright climbing. But it was the most pleasant kind of climbing. The rocks were fast and unencumbered with débris; the cracks were good, although not numerous; and there was nothing to fear except from one's-self.

Hardly an hour passed before we arrived at the 'Chimney.' A smooth, straight slab of rock was fixed, at a considerable angle, between two others equally smooth. My companion essayed to go up, and, after crumpling his long body into many ridiculous positions, he said that he would not, for he could not, manage it. With some little trouble I got up unassisted, and then my guide tied himself on to the end of our rope, and I endeavoured to pull him up. But he was so awkward that he did little for himself, and so heavy that he proved too much for *me*, and after several attempts he untied himself, and quietly observed that he should go down. I told him he was a coward, and *he* mentioned his opinion of *me*. I requested him to go to Breuil, and to say that he had left his 'monsieur' on the mountain, and he turned to go; whereupon I had to eat humble pie and ask him to come back; for, although it was not very difficult to go up, and not at all dangerous with a man standing below, it was quite another thing to come down, as the lower edge overhung in a provoking manner.

The day was perfect; the sun was pouring down grateful warmth; the wind had fallen; the way seemed clear, no insuperable obstacle was in sight; but what could one do alone? I stood on the top, chafing under this unexpected contretemps, and remained for some time irresolute; but as it became apparent that the Chimney was swept more frequently than was necessary (it was a natural channel for falling stones), I turned at last, descended with the assistance of my companion, and returned with him to Breuil, where we arrived about mid-day.

The Carrels did not shew themselves. We were told that they had not got to any great height,[1] and that the 'comrade,' who for convenience had taken off his shoes and tied them round his waist, had managed to let one of them slip, and had come down with a piece of cord fastened round his naked foot. Notwithstanding this, they had boldly glissaded down the Couloir du Lion, J.-J. Carrel having his shoeless foot tied up in a pocket handkerchief.

The Matterhorn was not assailed again in 1861. I left Breuil with the conviction that it was little use for a single person to organise an attack upon it, so great was its influence on the morals of the guides; and persuaded that it was desirable at least two should go, to back each other when required: and departed with my guide over the Col Théodule, longing, more than before, to make the ascent, and determined to return, if possible, with a companion, to lay siege to the mountain until one or the other was vanquished.

[1] I learned afterwards from Jean-Antoine Carrel that they got considerably higher than upon their previous attempts, and about 250 or 300 feet higher than Professor Tyndall in 1860. In 1862, I saw the initials of J.-A. Carrel cut on the rocks at the place where he and his comrade had turned back.

A winter attempt by Mr. T. S. Kennedy (1862).—The year 1862 was still young, and the Matterhorn, clad in its wintry garb, bore but little resemblance to the Matterhorn of the summer, when a new force came to do battle with the mountain, from another direction. Mr. T. S. Kennedy of Leeds conceived the extraordinary idea that the peak might prove less impracticable in January than in June, and arrived at Zermatt in the former month to put his conception to the test. With stout Peter Perrn and sturdy Peter Taugwalder he slept in the little chapel at the Schwarzsee, and on the next morning, like the Messrs. Parker, followed the ridge between the peak called Hörnli and the great mountain. But they found that snow in winter obeyed the ordinary laws, and that wind and frost were not less unkind than in summer.



THOMAS S. KENNEDY.

"The wind whirled up the snow and spicule of ice into our faces like needles, and flat pieces of ice a foot in diameter, carried up from the glacier below, went flying past. Still no one seemed to like to be the first to give in, till a gust fiercer than usual forced us to shelter for a time behind a rock. Immediately it was tacitly understood that our expedition must now end; but we determined to leave some memento of our visit, and, after descending a considerable distance, we found a suitable place with loose stones of which to build a cairn. A tower six feet high was erected; a bottle, with the date, was placed inside, and we retreated as rapidly as possible."

This cairn was placed at the spot marked upon Dufour's Map of Switzerland 10,820 feet (3298 mètres), and the highest point attained by Mr. Kennedy was not, I imagine, more than two or three hundred feet above it. The cairn disappeared long ago.

Shortly after this Professor Tyndall gave an account of the reason why he had left Breuil, in August 1861, without doing anything.[1] It seems that he sent his guide Bennen to reconnoitre, and that the latter made the following report to his employer:-

"Herr, I have examined the mountain carefully, and find it more difficult and dangerous than I had imagined. There is no place upon it where we could well pass the night. We might do so on yonder Col upon the snow, but there we should be almost frozen to death, and totally unfit for the work of the next day. On the rocks there is no ledge or cranny which could give us proper harbourage; and starting from Breuil it is certainly impossible to reach the summit in a single day." "I was entirely taken aback," says Tyndall, "by this report. I felt like a man whose grip had given way, and who was dropping through the air. . . Bennen was evidently dead against any attempt upon the mountain. 'We can, at all events, reach the lower of

[1] See page 22.

the two summits,' I remarked. 'Even that is difficult,' he replied; 'but when you have reached it, what then? The peak has neither name nor fame.'"[1]

I was more surprised than discouraged by this report by Bennen. One half of his assertions I knew to be wrong. The Col to which he referred was the Col du Lion, upon which we had passed a night, less than a week after he had spoken so authoritatively; and I had seen a place not far below the 'Chimney'—a place about 500 feet above the Col—where it seemed possible to construct a sleeping-place. Bennen's opinions seem to have undergone a complete change. In 1860 he is described as having been enthusiastic to make an attempt; in 1861 he was dead against one.

The first attempt in 1862.—Undismayed by this, my friend Mr. Reginald Macdonald agreed to join me in a renewed assault from the south; and, although we failed to secure Melchior Anderegg and some other notable guides, we obtained two men of repute, namely, Johann zum Taugwald and Johann Kronig, of Zermatt. We met there early in July, but stormy weather prevented us for some days even from passing to the other side of the chain; and when we crossed the Col Théodule on the 5th the weather was thoroughly unsettled—it was raining in the valleys, and snowing upon the mountains.

We had need of a porter, and, by the advice of our landlord, descended to the châlets of Breuil in search of one Luc Meynet. We found his house a mean abode, encumbered with cheese-making apparatus, and tenanted only by some bright-eyed children; but as they said that uncle Luc would soon be home, we waited at the door of the little châlet and watched for him. At last a speck was seen coming round the corner of the patch of pines below Breuil, and then the children clapped their hands, dropped their toys, and ran eagerly forward to meet him. We saw an ungainly, wobbling figure stoop down and catch up the little ones, kiss them on each cheek, and put them into the empty panniers on each side of the mule, and then heard it come on carolling, as if this was not a world of woe: and yet the face of little Luc Meynet, the hunchback of Breuil, bore traces of trouble and sorrow, and there was more than a touch of sadness in his voice when he said that he must look after his brother's children. All his difficulties were, however, at length overcome, and he agreed to join us to carry the tent.

In the past winter I had turned my attention to tents, and that which we had brought with us was the result of experiments to devise one which should be sufficiently portable to be taken over the most difficult ground, whilst combining lightness with stability. Its base was just under six feet square, and a cross-section perpendicular to its length was an equilateral triangle, the sides of which were six feet long. It was intended to accommodate four persons. It was

[1] *Mountaineering in* 1861, *a Vacation Tour*, by John Tyndall; 8vo, London, 1862; pp. 86-7. Tyndall and Bennen were mistaken in supposing that the mountain has two summits; it has only one. They seem to have been deceived by the appearance of that part of the south-west ridge which is called 'the shoulder' (l'épaule), as seen from Breuil. Viewed from that place, its southern end has certainly, through foreshortening, the semblance of a peak; but when one regards it from the Col Théodule, or from any place in the same direction, the delusion is at once apparent.



MATTERHO 'ROM THE SUMMIT OF THE THÉODU IS.

supported by four ash-poles, six feet and a half long, and one inch and a quarter thick, tapering to the top to an inch and an eighth, which were shod with iron points.

Sunday, the 6th of July, was showery, and snow fell on the Matterhorn, but we started on the following morning with our three men, and pursued my route of the previous year. I was requested to direct the way, as none save myself had been on the mountain before. I did not distinguish myself on this occasion, and led my companions nearly to the top of the Tête du Lion before the mistake was discovered. The party becoming rebellious, a little exploration was made towards our right, and we found that we were upon the top of the cliff overlooking the Col du Lion. The day was far advanced before we arrived at our camping-place on the Col. Profiting by the experience of last year, we did not pitch the tent actually on the snow, but collected a quantity of débris from the neighbouring ledges, and after constructing a rough platform of the larger pieces, levelled the whole with the dirt and mud. Meynet had proved invaluable as a tent-bearer; for—although his legs were more picturesque than symmetrical, and although he seemed to be built on principle with no two parts alike—his very deformities proved of service; and we quickly found he had spirit of no common order, and that few peasants are more agreeable companions, or better climbers, than little Luc Meynet, the hunchback of Breuil.

A strong wind sprang up from the east during the night, and in the morning it was blowing almost a hurricane. The tent behaved nobly, and we remained under its shelter for several hours after the sun had risen, uncertain what it was best to do. A lull tempted us to move, but we had scarcely ascended a hundred feet before the storm burst upon us with increased fury. Advance or return was alike impossible; the ridge was denuded of its débris; and we clutched our hardest when we saw stones as big as a man's fist blown away horizontally into space. We dared not attempt to stand upright, and remained stationary, on all fours, glued, as it were, to the rocks. It was intensely cold, for the blast had swept along the main chain of the Pennine Alps, and across the great snow-fields around Monte Rosa. Our warmth and courage rapidly evaporated, and at the next lull we retreated to the tent; having to halt several times even in that short distance. Taugwald and Kronig then declared that they had had enough, and refused to have anything more to do with the mountain. Meynet also informed us that he would be required down below for important cheese-making operations on the following day. It was therefore needful to return to Breuil, and we arrived there at 2.30 P.M., extremely chagrined at our complete defeat.

Second attempt in 1862.—Jean-Antoine Carrel, attracted by rumours, had come up to the inn during our absence, and after some negotiations agreed to accompany us, with one of his friends named Pession, on the first fine day. We thought ourselves fortunate; for Carrel clearly considered the mountain a kind of *preserve*, and regarded our late attempt as an act of *poaching*. The wind blew itself out during the night, and we started again, with these two men and a porter, at

8 A.M. on the 9th, with unexceptionable weather. Carrel pleased us by suggesting that we should camp even higher than before; and we accordingly proceeded, without resting at the Col, until we overtopped the Tête du Lion. Near the foot of the 'Chimney,' a little below the crest of the ridge, and on its eastern side, we found a protected place; and by building up from ledge to ledge (under the direction of our leader, who at that time was a working mason), we at length constructed a platform of sufficient size and of considerable solidity. Its height was about 12,550 feet above the sea. We then pushed on, as the day was very fine, and, after a short hour's scramble, got to the foot of the Great Tower upon the ridge (that is to say, to Mr. Hawkins' farthest point), and afterwards returned to our bivouac. We turned out again at 4 A.M., and at 5.15 started upwards once more, with fine weather and the thermometer at 28°. Carrel scrambled up the Chimney, and Macdonald and I after him. Pession's turn came, but when he arrived at the top he looked very ill, declared himself to be thoroughly incapable, and said that he must go back. We waited some time, but he did not get better, neither could we learn the nature of his illness. Carrel flatly refused to go on with us alone. We were helpless. Macdonald, ever the coolest of the cool, suggested that we should try what we could do without them; but our better judgment prevailed, and, finally, we returned together to Breuil. On the next day my friend started for London.

Three times I had essayed the ascent of this mountain, and on each occasion had failed ignominiously. I had not advanced a yard beyond my predecessors. Up to the height of nearly 13,000 feet there were no extraordinary difficulties; the way so far might even become 'a matter of amusement.' Only 1800 feet remained; but they were as yet untrodden, and might present the most formidable obstacles. No man could expect to climb them by himself. A morsel of rock only seven feet high might at any time defeat him, if it were perpendicular. Such a place might be possible to two, or a bagatelle to three men. It was evident that a party should consist of three men at least. But where could the other two men be obtained. Carrel was the only man who exhibited any enthusiasm in the matter; and he, in 1861, had absolutely refused to go unless the party consisted of at least *four* persons. Want of men made the difficulty, not the mountain.

The weather became bad again, so I went to Zermatt on the chance of picking up a man, and remained there during a week of storms. Not one of the better men, however, could be induced to come, and I returned to Breuil on the 17th, hoping to combine the skill of Carrel with the willingness of Meynet on a new attempt, by the same route as before; for the upper part of the north-eastern ridge, which I had inspected in the meantime, seemed to be entirely impracticable. Both men were inclined to go, but their ordinary occupations prevented them from starting at once.

A solitary scramble on the Matterhorn (1862).—My tent had been left rolled up at the second platform, and whilst waiting for the men it occurred to me that it might have been blown away during the late

stormy weather; so I started off on the 18th to see if this were so or not. The way was by this time familiar, and I mounted rapidly, astonishing the friendly herdsmen—who nodded recognition as I flitted past them and the cows—for I was alone, because no man was available. But more deliberation was necessary when the pastures were passed, and climbing began, as it was needful to mark each step, in case of mist, or surprise by night. It is one of the few things which can be said in favour of mountaineering alone (a practice which has little besides to commend it), that it awakens a man's faculties, and makes him observe. When one has no arms to help, and no head to guide him except his own, he must needs take note even of small things, for he cannot afford to throw away a chance; and so it came to pass, upon my solitary scramble, when above the snow-line, and beyond the ordinary limits of flowering plants, when peering about, noting angles and landmarks, that my eyes fell upon the tiny straggling plants—oftentimes a single flower on a single stalk—pioneers of vegetation, atoms of life in a world of desolation, which had found their way up—who can tell how?—from far below, and were obtaining bare sustenance from the scanty soil in protected nooks; and it gave a new interest to the well-known rocks to see what a gallant fight the survivors made (for many must have perished in the attempt) to ascend the great mountain. The Gentian, as one might have expected, was there, but it was run close by Saxifrages, and by *Linaria alpina*, and was beaten by *Thlaspi rotundifolium*, which latter plant was the highest I was able to secure, although it too was overtopped by a little white flower that I knew not, and was unable to reach.

The tent was safe, although snowed up; and I turned to contemplate the view, which, when seen alone and undisturbed, had all the strength and charm of complete novelty. The highest peaks of the Pennine chain were in front—the Breithorn (13,685 feet), the Lyskamm (14,889), and Monte Rosa (15,217); then, turning to the right, the entire block of mountains which separated the Val Tournanche from the Val d'Ayas was seen at a glance, with its culminating point the Grand Tournalin (11,086). Behind were the ranges dividing the Val d'Ayas from the Valley of Gressoney, backed by higher summits. More still to the right, the eye wandered down the entire length of the Val Tournanche, and then rested upon the Graian Alps with their innumerable peaks, and upon the isolated Pyramid of Monte Viso (12,643) in the extreme distance. Next, still turning to the right, came the mountains intervening between the Val Tournanche and the Val Barthélemy. Mont Rouss (a round-topped snowy summit, which seems so important from Breuil, but which is in reality only a buttress of the higher mountain, the Château des Dames) had long ago sunk, and the eye passed over it, scarcely heeding its existence, to the Becca Salle (or Bec de Sale),—a miniature Matterhorn—and to other, and more important heights. Then the grand mass of the Dent d'Hérens (13,714) stopped the way; a noble mountain, encrusted on its northern slopes with enormous hanging glaciers, which broke away at mid-day in immense slices, and thundered down on to the Tiefenmatten Glacier; and lastly, most splendid of all, came the Dent

Blanche (14,318), soaring above the basin of the great Z'Muttgletscher. Such a view is hardly to be matched in the Alps, and *this* view is very rarely seen, as I saw it, perfectly unclouded.

Time sped away unregarded, and the little birds which had built their nests on the neighbouring cliffs had begun to chirp their evening hymn before I thought of returning. Half mechanically I turned to the tent, unrolled it, and set it up. It contained food enough for several days, and I resolved to stay over the night. I had started from Breuil without provisions, or telling Favre—the innkeeper, who was accustomed to my erratic ways—where I was going. I returned to the view. The sun was setting, and its rosy rays, blending with the snowy blue, had thrown a pale, pure violet far as the eye could see; the valleys were drowned in purple gloom, whilst the summits shone with unnatural brightness: and as I sat in the door of the tent, and watched the twilight change to darkness, the earth seemed to become less earthy and almost sublime; the world seemed dead, and I, its sole inhabitant. By and by, the moon as it rose brought the hills again into sight, and by a judicious repression of detail rendered the view yet more magnificent. Something in the south hung like a great glow-worm in the air; it was too large for a star, and too steady for a meteor; and it was long before I could realise the scarcely credible fact that it was the moonlight glittering on the great snow-slope on the north side of Monte Viso, at a distance, as the crow flies, of 98 miles. Shivering, at last I entered the tent and made my coffee. The night was passed comfortably, and the next morning, tempted by the brilliancy of the weather, I proceeded yet higher in search of another place for a platform.

Solitary scrambling over a pretty wide area had shewn me that a single individual is subjected to many difficulties which do not trouble a party of two or three men, and that the disadvantages of being alone are more felt while descending than during the ascent. In order to neutralise these inconveniences, I devised two little appliances, which were now brought into use for the first time. One was a claw—a kind of grapnel—about five inches long, made of shear steel, one-fifth of an inch thick. This was of use in difficult places where there was no hold within arm's length, but where there were cracks or ledges some distance higher. The claw could be stuck on the end of the alpenstock and dropped into such places, or, on extreme occasions, flung up until it attached itself to something. The edges that laid hold of the rocks were serrated, which tended to make them catch more readily, and the other end had a ring to which a rope was fastened. It must not be understood that this was employed for hauling one's-self up for any great distance, but that it was used in ascending, at the most, for only a few yards at a time. In descending, however, it could be prudently used for a greater distance at a time, as the claws could be planted firmly; but it was necessary to keep the rope taut, and the pull constantly in the direction of the length of the implement, otherwise it had a tendency to slip away. The second device was merely a modification of a dodge practised by all climbers. It is often necessary for a solitary climber (or for the last

man of a party during a descent) to make a loop in the end of his rope, to pass it over some rocks, and to come down holding the free end. The loop is then jerked off, and the process may be repeated. But as it sometimes happens that there are no rocks at hand which will allow a loose loop to be used, a slip-knot has to be resorted to, and the rope is drawn in tightly. Consequently, it will occur that it is not possible to jerk the loop off, and the rope has to be cut and left behind. To prevent this, I had a wrought-iron ring (two and a quarter inches in diameter and three eighths of an inch thick) attached to one end of my rope. A loop could be made in a moment by passing the other end of the rope through this ring, which of course slipped up and held tightly as I descended holding the free end. A strong piece of cord was also attached to the ring, and, on arriving at the bottom, this was pulled; the ring slid back again, and the loop was whipped off readily. By means of these two simple appliances I was able to ascend and descend rocks, which otherwise would have been completely impassable. The combined weight of these two things amounted to less than half-a-pound.[1]

It has been mentioned that the rocks of the south-west ridge are by no means difficult for some distance above the Col du Lion. This is true of them up to the level of the Chimney, but they steepen when that is passed, and remaining smooth and with but few fractures, and still continuing to dip outwards, present some steps of a very uncertain kind, particularly when they are glazed with ice. At this point (just above the Chimney) the climber is obliged to follow the southern (or Breuil) side of the ridge, but, in a few feet more, one must turn over to the northern (or Z'Mutt) side, where, in most years, nature kindly provides a snow-slope. When this is surmounted, one can again return to the crest of the ridge, and follow it, by easy rocks, to the foot of the Great Tower.[2] This was the highest point attained by Mr. Hawkins in 1860, and it was also our highest on the 9th of July.

This Great Tower is one of the most striking features of the ridge. It stands out like a turret at the angle of a castle. Behind it a battlemented wall leads upwards to the citadel. Seen from the Théodule pass it looks only an insignificant pinnacle, but as one approaches it (on the ridge) so it seems to rise, and, when one is at its base, it completely conceals the upper parts of the mountain. I found here a suitable place for the tent; which, although not so well protected as the second platform, possessed the advantage of being 300 feet higher up; and fascinated by the wildness of the cliffs, and enticed by the perfection of the weather, I went on to see what was behind.

The first step was a difficult one. The ridge became diminished to the least possible width—it was hard to keep one's balance—and just where it was narrowest, a more than perpendicular mass barred the way. Nothing fairly within arm's reach could be laid hold of;

[1] Illustrations of these appliances are given in *Scrambles amongst the Alps*.

[2] In consequence of rock-falls which have occurred, this description is no longer correct.

it was necessary to spring up, and then to haul one's-self over the sharp edge by sheer strength. Progression directly upwards was then impossible. Enormous and appalling precipices plunged down to the Tiefenmatten Glacier on the left, but round the right-hand side it was just possible to go. One hindrance then succeeded another, and much time was consumed in seeking a way. I have a vivid recollection of a gully of more than usual perplexity at the side of the Great Tower, with minute ledges and steep walls; of the ledges dwindling away and at last ceasing; and of finding myself, with arms and legs divergent, fixed as if crucified, pressing against the rock, and feeling each rise and fall of my chest as I breathed; of screwing my head round to look for hold, and not seeing any, and of jumping sideways on to the other side. 'Tis vain to attempt to describe such places. Whether they are sketched with a light hand, or wrought out in laborious detail, one stands an equal chance of being misunderstood. Their enchantment to the climber arises from their calls on his faculties, in their demands on his strength, and on overcoming the impediments which they oppose to his skill. The non-mountaineering reader cannot feel this, and his interest in descriptions of such places is usually small, unless he supposes that the situations are perilous. They are not necessarily perilous, but I think it is impossible to avoid giving such an impression if the difficulties are particularly insisted upon.

There was a change in the quality of the rock, and there was a change in the appearance of the ridge. The rocks (talcose gneiss) below this spot were singularly firm; it was rarely necessary to test one's hold; the way led over the living rock, and not up rent-off fragments. But here, all was decay and ruin. The crest of the ridge was shattered and cleft, and the feet sank in the chips which had drifted down; while above, huge blocks, hacked and carved by the hand of time, nodded to the sky, looking like the grave-stones of giants. Out of curiosity I wandered to a notch in the ridge, between two tottering piles of immense masses, which seemed to need but a few pounds on one or the other side to make them fall; so nicely poised that they would literally have rocked in the wind, for they were put in motion by a touch; and based on support so frail that I wondered they did not collapse before my eyes. In the whole range of my Alpine experience I have seen nothing more striking than this desolate, ruined, and shattered ridge at the back of the Great Tower. It is needless to say that it is impossible to climb by the *crest* of the ridge at this part; still one is compelled to keep near to it, for there is no other way. Generally speaking, the angles on the Matterhorn are too steep to allow the formation of considerable beds of snow, but here there is a corner which permits it to accumulate, and it is turned to gratefully, for, by its assistance, one can ascend four times as rapidly as upon the rocks.

The Tower was now almost out of sight, and I looked over the central Pennine Alps to the Grand Combin, and to the chain of Mont Blanc. My neighbour, the Dent d'Hérens, still rose above me, although but slightly, and the height which had been attained could

be measured by its help. So far, I had no doubts about my capacity to descend that which had been ascended; but, in a short time, on looking ahead, I saw that the cliffs steepened, and I turned back (without pushing on to them, and getting into inextricable difficulties), exulting in the thought that they would be passed when we returned together, and that I had, without assistance, got nearly to the height of the Dent d'Hérens, and considerably higher than any one had been before.[1] My exultation was a little premature.

About 5 P.M. I left the tent again, and thought myself as good as at Breuil. The friendly rope and claw had done good service, and had smoothened all the difficulties. I lowered myself through the Chimney, however, by making a fixture of the rope, which I then cut off, and left behind, as there was enough and to spare. My axe had proved a great nuisance in coming down, and I left it in the tent. It was not attached to the bâton, but was a separate affair, —an old navy boarding-axe. While cutting up the different snow-beds on the ascent, the bâton trailed behind fastened to the rope; and, when climbing, the axe was carried behind, run through the rope tied round my waist, and was sufficiently out of the way; but in descending, when coming down face outwards (as is always best where it is possible), the head or the handle of the weapon caught frequently against the rocks, and several times nearly upset me. So, out of laziness if you will, it was left in the tent. I paid dearly for the imprudence.

The Col du Lion was passed, and fifty yards more would have placed me on the 'Great Staircase,' down which one can run. But on arriving at an angle of the cliffs of the Tête du Lion, while skirting the upper edge of the snow which abuts against them, I found that the heat of the two past days had nearly obliterated the steps which had been cut when coming up. The rocks happened to be impracticable just at this corner, and it was necessary to make the steps afresh. The snow was too hard to beat or tread down, and at the angle it was all but ice; half-a-dozen steps only were required, and then the ledges could be followed again. So I held to the rock with my right hand, and prodded at the snow with the point of my stick until a good step was made, and then, leaning round the angle, did the same for the other side. So far well, but in attempting to pass the corner I slipped and fell.

The slope was steep on which this took place, and was at the top of a gully that led down through two subordinate buttresses towards the Glacier du Lion—which was just seen, a thousand feet below. The gully narrowed and narrowed, until there was a mere thread of snow lying between two walls of rock, which came to an abrupt termination at the top of a precipice that intervened between it and the glacier. Imagine a funnel cut in half through its length, placed at an angle of 45 degrees, with its point below and its concave side uppermost, and you will have a fair idea of the place.

[1] A remarkable streak of snow (marked 'cravate' in the outline of the Matterhorn, as seen from the Théodule) runs across the cliff at this part of the mountain. My highest point was somewhat higher than the lowest part of this snow, and was consequently nearly 13,500 feet above the sea.

The knapsack brought my head down first, and I pitched into some rocks about a dozen feet below; they caught something and tumbled me off the edge, head over heels, into the gully; the bâton was dashed from my hands, and I whirled downwards in a series of bounds, each longer than the last; now over ice, now into rocks; striking my head four or five times, each time with increased force. The last bound sent me spinning through the air, in a leap of fifty or sixty feet, from one side of the gully to the other, and I struck the rocks, luckily, with the whole of my left side. They caught my clothes for a moment, and I fell back on to the snow with motion arrested. My head fortunately came the right side up, and a few frantic catches brought me to a halt, in the neck of the gully, and on the verge of the precipice. Bâton, hat, and veil skimmed by and disappeared, and the crash of the rocks—which I had started—as they fell on to the glacier, told how narrow had been the escape from utter destruction. As it was, I fell nearly 200 feet in seven or eight bounds. Ten feet more would have taken me in one gigantic leap of 800 feet on to the glacier below.

The situation was sufficiently serious. The rocks could not be let go for a moment, and the blood was spirting out of more than twenty cuts. The most serious ones were in the head, and I vainly tried to close them with one hand, whilst holding on with the other. It was useless; the blood jerked out in blinding jets at each pulsation. At last, in a moment of inspiration, I kicked out a big lump of snow, and stuck it as a plaster on my head. The idea was a happy one, and the flow of blood diminished. Then, scrambling up, I got, not a moment too soon, to a place of safety, and fainted away. The sun was setting when consciousness returned, and it was pitch dark before the Great Staircase was descended; but, by a combination of luck and care, the whole 4900 feet of descent to Breuil was accomplished without a slip, or once missing the way. I entered the inn stealthily, wishing to escape to my room unnoticed. But Favre met me in the passage, demanded "Who is it?" screamed with fright when he got a light, and aroused the household. Two dozen heads then held solemn council over mine, with more talk than action. The natives were unanimous in recommending that hot wine mixed with salt should be rubbed into the cuts. I protested, but they insisted. It was all the doctoring they received. Whether their rapid healing was to be attributed to that simple remedy, or to a good state of health, is a question. They closed up remarkably quickly, and, in a few days I was able to move again.[1]

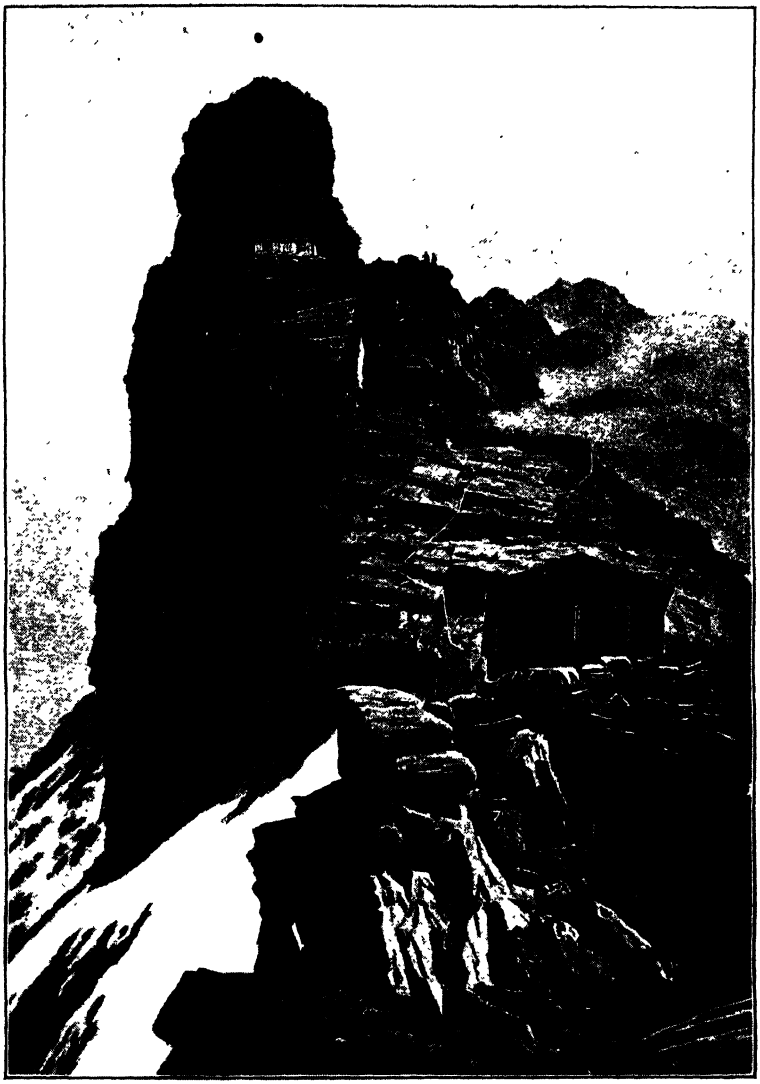
Fourth attempt in 1862.—The news of this accident brought Jean-Antoine Carrel up to Breuil, and along with the haughty chasseur came one of his relatives, a strong and able young fellow named Cæsar. With these two men and Meynet I made another start on the 23rd of July. We got to the tent without any trouble, and on the following day had ascended beyond the Tower, and were picking our way cautiously over the loose rocks behind (where my traces

[1] I received much attention from a kind English lady (Mrs. J. H. Daniell) who was staying in the inn.

of the week before were well apparent) in lovely weather, when one of those abominable and almost instantaneous changes occurred, to which the Matterhorn is so liable on its southern side. Mists were created out of invisible vapours, and in a few minutes snow fell heavily. We stopped, as this part was exceedingly difficult, and, unwilling to retreat, remained on the spot several hours, in hopes that another change would occur; but, as it did not, we at length went down to the base of the Great Tower, and commenced to make a third platform,[1] at the height of 12,992 feet above the sea. It still continued to snow, and we took refuge in the tent. Carrel argued that the weather had broken up, and that the mountain would become so glazed with ice as to render any attempt futile; and I, that the change was only temporary, and that the rocks were too hot to allow ice to form upon them. I wished to stay until the weather improved, but my leader would not endure contradiction, grew more positive, and insisted that we must go down. We went down, and when we got below the Col his opinion was found to be wrong; the cloud was confined to the upper 3000 feet, and outside it there was brilliant weather.

Carrel was not an easy man to manage. He was perfectly aware that he was the cock of the Val Tournanche, and he commanded the other men as by right. He was equally conscious that he was indispensable to me, and took no pains to conceal his knowledge of the fact. If he had been commanded, or if he had been entreated to stop, it would have been all the same. But, let me repeat, he was the only first-rate climber I could find who believed that the mountain was not inaccessible. With him I had hopes, but without him none; so he was allowed to do as he would. His will on this occasion was almost incomprehensible. He certainly could not be charged with cowardice, for a bolder man could hardly be found; nor was he turning away on account of difficulty, for nothing to which we had yet come seemed to be difficult to *him;* and his strong personal desire to make the ascent was evident. There was no occasion to come down on account of food, for we had taken, to guard against this very casualty, enough to last for a week; and there was no danger, and little or no discomfort, in stopping in the tent. It seemed to me that he was spinning out the ascent for his own purposes, and that although he wished very much to be the first man on the top, and did not object to be accompanied by any one else who had the same wish, he had no intention of letting one succeed too soon,—perhaps to give a greater appearance of *éclat* when the thing was accomplished. As he feared no rival, he may have supposed that the more difficulties he made the more valuable he would be estimated; though, to do him justice, he never shewed any great hunger for money. His demands were fair, not excessive; but he always stipulated for so much per day, and so, under any circumstances, he did not do badly.

[1] This was at the position occupied by the higher of the two *cabanes* seen in the accompanying illustration, which is from a photograph taken by myself in 1895. The upper hut is now in a precarious condition. The lower one was put up in 1893.



THE GREAT TOWER, WITH THE OLD AND NEW CABANES.

Vexed at having my time thus frittered away, I was still well pleased when he volunteered to start again on the morrow, if it was fine. We were to advance the tent to the foot of the Tower, to fix ropes in the most difficult parts beyond, and to make a push for the summit on the following day.

Fifth attempt in 1862.—The next morning (Friday the 25th) when I arose, good little Meynet was ready and waiting, and he said that the two Carrels had gone off some time before, and had left word that they intended marmot-hunting, as the day was favourable for that sport. My holiday had nearly expired, and these men clearly could not be relied upon; so, as a last resort, I proposed to the hunchback to accompany me alone, to see if we could not get higher than before, though of reaching the summit there was little or no hope. He did not hesitate, and in a few hours we stood—for the third time together—upon the Col du Lion. It was the first time Meynet had seen the view unclouded. The poor little deformed peasant gazed upon it silently and reverently for a time, and then, unconsciously, fell on one knee in an attitude of adoration, and clasped his hands, exclaiming in ecstasy, "Oh, beautiful mountains!" His actions were as appropriate as his words were natural, and tears bore witness to the reality of his emotion.

Our power was too limited to advance the tent, so we slept at the old station, and starting very early the next morning, passed the place where we had turned back on the 24th, and, subsequently, my highest point on the 19th. We found the crest of the ridge so treacherous that we took to the cliffs on the right, although most unwillingly. Little by little we fought our way up, but at length we were both spread-eagled on the all but perpendicular face, unable to advance, and barely able to descend. We returned to the ridge. It was almost equally difficult, and infinitely more unstable; and at length, after having pushed our attempts as far as was prudent, I determined to return to Breuil, and to have a light ladder made to assist us to overcome some of the steepest parts.[1] I expected, too, that by this time Carrel would have had enough marmot-hunting, and would deign to accompany us again.

We came down at a great pace, for we were now so familiar with the mountain, and with each other's wants, that we knew immediately when to give a helping hand, and when to let alone. The rocks also were in a better state than I had ever seen them, being almost entirely free from glaze of ice. Meynet was always merriest on the difficult parts, and, upon the most difficult, kept on enunciating the sentiment, "We can only die once," a thought which seemed to afford him infinite satisfaction. We arrived at the inn early in the evening, and I found my projects summarily and unexpectedly knocked on the head.

[1] This appeared to be the most difficult part of the mountain. One was driven to keep to the edge of the ridge, or very near to it; and at the point where we turned back (which was almost as high as the *highest* part of the 'cravate,' and perhaps 100 feet higher than my scramble on the 19th) there were smooth walls seven or eight feet high in every direction, which were impassable to a single man, and which could only be surmounted by the assistance of ladders, or by using one's comrades as ladders.

Dr. Tyndall tries again (1862).—Professor Tyndall had arrived while we were absent, and had engaged both Cæsar and Jean-Antoine Carrel. Bennen was also with him, together with a powerful and active friend, a Valaisan guide, named Anton Walter. They had a ladder already prepared, provisions were being collected, and they intended to start on the following morning (Sunday). This new arrival took me by surprise. Bennen, it will be remembered, refused point-blank to take Professor Tyndall on the Matterhorn in 1861. "He was dead against any attempt on the mountain," says Tyndall. He was now eager to set out. Professor Tyndall has not explained in what way this revolution came about in his guide. I was equally astonished at the faithlessness of Carrel, and attributed it to pique at our having presumed to do without him. It was useless to compete with the Professor and his four men, who were ready to start in a few hours, so I waited to see what would come of their attempt.

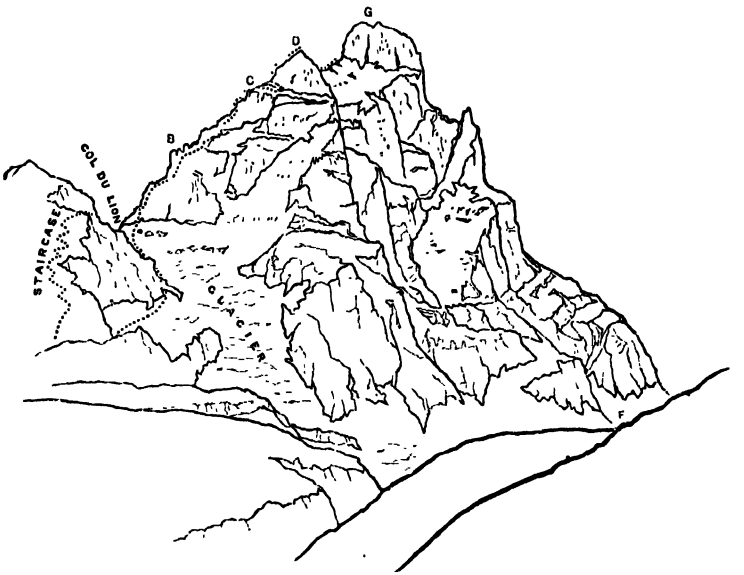
Everything seemed to favour it, and they set out on a fine morning in high spirits, leaving me tormented with envy and all uncharitableness. If they succeeded, they carried off the prize for which I had been so long struggling; and if they failed, there was no time to make another attempt, for I was due in a few days more in London. When this came home clearly to me, I resolved to leave Breuil at once, but, when packing up, found that some necessaries had been left behind in the tent. So I went off about mid-day to recover them; caught the army of the Professor before it reached the Col, as they were going very slowly; left them there (stopping to take food), and went on to the tent. I was near to it when all at once I heard a noise aloft, and, on looking up, perceived a stone of at least a foot cube flying straight at my head. [See illustration on p. 42.] I ducked, and scrambled under the lee side of a friendly rock, while the missile went by with a loud buzz. It was the advanced guard of a perfect storm of stones, which descended with infernal clatter down the very edge of the ridge, leaving a trail of dust behind, with a strong smell of sulphur, that told who had sent them. The men below were on the look-out, but the stones did not come near them, and breaking away on one side descended to the glacier.

I waited at the tent to welcome the Professor, and when he arrived went down to Breuil. Early next morning some one ran to me saying that a flag was seen on the summit of the Matterhorn. It was not so, however, although I saw that they had passed the place where we had turned back on the 26th. I had now no doubt of their final success, for they had got beyond the point which Carrel, not less than myself, had always considered to be the most questionable place on the whole mountain. Up to it there was no choice of route. I suppose that at no one point between it and the Col was it possible to diverge a dozen paces to the right or left; but beyond it it was otherwise, and we had always agreed, in our debates, that if it could be passed success was certain. The accompanying outline from a sketch taken from the door of the inn at Breuil will help to explain. The letter B indicates the position of the Great Tower; C the 'cravate' (the strongly-marked streak of snow referred to on p. 40 which we just



A CANNONADE ON THE MATTERHORN.

failed to arrive at on the 26th); D the place where we now saw something that looked like a flag. Behind the point D a nearly level ridge leads up to the foot of the final peak. This will be understood by a reference to the outline upon p. 44, where the same letters indicate the same places. It was just now said, we considered that if the point C could be passed, success was certain. Tyndall was at D very early in the morning, and I did not doubt that he would reach the summit, although it yet remained problematical whether he would be able to stand on the very highest point. The summit was evidently

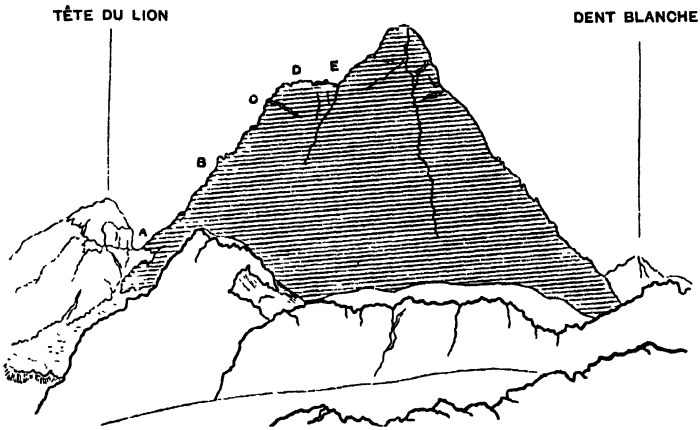


B. GREAT TOWER. C. CRAVATE.
D. END OF THE SHOULDER. F. GREAT COULOIR.

formed of a long ridge, on which there were two points nearly equally elevated so equally that one could not say which was the highest and between the two there seemed to be a deep notch marked G on the outline, which might defeat one at the very last moment.

My knapsack was packed, and I had drunk a parting glass of wine with Favre, who was jubilant at the success which was to make the fortune of his inn; but I could not bring myself to leave until the result was heard, and lingered about, as a foolish lover hovers round the object of his affections, even after he has been contemptuously rejected. The sun had set before the men were descried coming over the pastures. There was no spring in their steps—they, too, were defeated. The Carrels hid their heads, and the others said, as men will do when they have been beaten, that the mountain was horrible, impossible, and so forth. Professor Tyndall told me they had arrived

within a stone's-throw of the summit, and admonished me to have nothing more to do with the mountain. I understood him to say that he should not try again, and ran down to the village of Val Tournanche, almost inclined to believe that the mountain was inaccessible; leaving the tent, ropes, and other matters in the hands of Favre, to be placed at the disposal of any person who wished to ascend it, more, I am afraid, out of irony than for generosity. There may have been those who believed that the Matterhorn could be ascended, but, anyhow, their faith did not bring forth works. No one tried again in 1862.



A. COL DU LION. B. GREAT TOWER. C. CRAVATE.
D. SHOULDER. E. TYNDALL'S FARTHEST.

My seventh attempt to ascend the Matterhorn (1863). In the spring of 1863, I heard the cause of the failure of Professor Tyndall, and learnt that the case was not so hopeless as it appeared to be at one time. I found that he arrived as far only as the northern end of 'the shoulder.' The point at which, he says, they "sat down with broken hopes, the summit within a stone's-throw of us,[1] but still defying us," was not the notch or cleft at G (which is literally within a stone's-throw of the summit), but another and more formidable cleft that intervenes between the northern end of 'the shoulder' and the commencement of the final peak. It is marked E on the accompanying outline. Carrel and all the men who had been with me knew of the existence of this cleft, and of the pinnacle which rose between it and the final peak; and we had frequently talked about the best manner of passing the place. On this we disagreed, but we were both of

[1] It is not easy to understand how Dr. Tyndall and Bennen overlooked the existence of this cleft, for it is seen over several points of the compass, and particularly well from the southern side of the Théodule pass. Still more difficult is it to explain how the Professor came to consider that he was only 'a stone's-throw' from the summit; for, when he got to the end of 'the shoulder,' he must have been aware that the *whole height of the final peak was still above him.*

opinion that when we got to 'the shoulder,' it would be necessary to bear down gradually to the right or to the left, to avoid coming to the *top* of the notch. Tyndall's party, after arriving at 'the shoulder,' was led by his guides along the crest of the ridge, and, consequently, when they got to its northern end, they came to the top of the notch, instead of the bottom—to the dismay of all but the Carrels. Dr. Tyndall said "the mountain is 14,800 feet high, and 14,600 feet had been accomplished." He greatly deceived himself; by the barometric measurements of Signor Giordano the notch is no less than 800 feet below the summit.

I sauntered up the valley on July 31, and got to Breuil when all were asleep. A halo round the moon promised watery weather, and we were not disappointed, for, on the next day (August 1), rain fell heavily, and when the clouds lifted for a time, we saw that new snow lay thickly over everything higher than 9000 feet. J.-A. Carrel was ready and waiting (as I had determined to give the bold cragsman another chance); and he did not need to say that the Matterhorn would be impracticable for several days after all this new snow, even if the weather were to arrange itself at once. Whilst waiting, we made the tour of the mountain, and returned to Breuil after the absence of six days.

Carrel had *carte blanche* in the matter of guides, and his choice fell upon his relative Cæsar, Luc Meynet, and two others whose names I do not know. These men were now brought together, and our preparations were completed, as the weather was clearing up. We rested on Sunday, August 9, eagerly watching the lessening of the mists around the great peak, and started just before dawn upon the 10th, on a still and cloudless morning, which seemed to promise a happy termination to our enterprise.

By going always, though gently, we arrived upon the Col du Lion before nine o'clock. Changes were apparent. Familiar ledges had vanished; the platform, whereupon my tent had stood, looked very forlorn, its stones had been scattered by wind and frost, and had half disappeared; and the summit of the Col itself, which in 1862 had always been respectably broad, and covered by snow, was now sharper than the ridge of any church roof, and was hard ice. Already we had found that the bad weather of the past week had done its work. The rocks for several hundred feet below the Col were varnished with ice. Loose, incoherent snow covered the older and harder beds below, and we nearly lost our leader through its treacherousness. He stepped on some snow which seemed firm, and raised his axe to deliver a swinging blow, but, just as it was highest, the crust of the slope upon which he stood broke away, and poured down in serpentine streams, leaving long, bare strips, which glittered in the sun, for they were glassy ice. Carrel, with admirable readiness, flung himself back on to the rock off which he had stepped, and was at once secured. He simply remarked, "It is time we were tied up," and, after we had been tied up, he went to work again as if nothing had happened.

We had abundant illustrations during the next two hours of the

value of a rope to climbers. We were tied up rather widely apart, and advanced, generally, in pairs. Carrel, who led, was followed closely by another man, who lent him a shoulder or placed an axe-head under his feet, when there was need; and when this couple were well placed the second pair advanced, in similar fashion,—the rope being drawn in by those above, and paid out gradually by those below. The leading men again advanced, or the third pair, and so on. This manner of progression was slow, but sure. One man only moved at a time, and if he slipped (and we frequently did slip) he could slide scarcely a foot without being checked by the others. The certainty and safety of the method gave confidence to the one who was moving, and not only nerved him to put out his powers to the utmost, but sustained nerve in really difficult situations. For these rocks (which, it has been already said, were easy enough under ordinary circumstances) were now difficult in a high degree. The snow-water which had trickled down for many days past in little streams, had taken, naturally, the very route by which we wished to ascend; and, refrozen in the night, had glazed the slabs over which we had to pass,—sometimes with a fine film of ice as thin as a sheet of paper, and sometimes so thickly that we could almost cut footsteps in it. The weather was superb, the men made light of the toil, and shouted to rouse the echoes from the Dent d'Hérens.

We went on gaily, passed the second tent platform, the Chimney, and the other well-remembered points, and reckoned, confidently, on sleeping that night upon the top of 'the shoulder'; but, before we had well arrived at the foot of the Great Tower, a sudden rush of cold air warned us to look out.

It was difficult to say where this air came from. It did not blow as a wind, but descended rather as the water in a shower-bath! All was tranquil again; the atmosphere *showed* no signs of disturbance; there was a dead calm, and not a speck of cloud to be seen anywhere. But we did not remain very long in this state. The cold air came again, and this time it was difficult to say where it did *not* come from. We jammed down our hats as it beat against the ridge, and screamed amongst the crags. Before we had got to the foot of the Tower, mists had been formed above and below. They appeared at first in small, isolated patches (in several places at the same time), which danced and jerked and were torn into shreds by the wind, but grew larger under the process. They were united together, and rent again,—shewing us the blue sky for a moment, and blotting it out the next; and augmented incessantly, until the whole heavens were filled with whirling, boiling clouds. Before we could take off our packs, and get under any kind of shelter, a hurricane of snow burst upon us from the east. It fell very heavily, and in a few minutes the ridge was covered by it. "What shall we do?" I shouted to Carrel. "Monsieur," said he, "the wind is bad; the weather has changed; we are heavily laden. Here is a fine *gîte;* let us stop! If we go on we shall be half-frozen. That is *my* opinion." No one differed from him; so we fell to work to make a place for the tent, and in a couple of hours completed the platform which we

had commenced in 1862. The clouds had blackened during that time, and we had hardly finished our task before a thunderstorm broke upon us with appalling fury. Forked lightning shot out at the turrets above, and at the crags below. It was so close that we quailed at its darts. It seemed to scorch us,—we were in the very focus of the storm. The thunder was simultaneous with the flashes; short and sharp, and more like the noise of a door that is violently slammed, multiplied a thousand-fold, than any noise to which I can compare it.

The wind during all this time seemed to blow tolerably consistently from the east. It smote the tent so vehemently (notwithstanding it was partly protected by rocks) that we had grave fears our refuge might be blown away bodily, with ourselves inside; so, during some of the lulls, we issued out and built a wall to windward. At half-past three the wind changed to the north-west, and the clouds vanished. We immediately took the opportunity to send down one of the porters (under protection of some of the others, a little beyond the Col du Lion), as the tent could not accommodate more than five persons. From this time to sunset the weather was variable. It was sometimes blowing and snowing hard, and sometimes a dead calm. The bad weather was evidently confined to the Mont Cervin, for when the clouds lifted we could see everything that could be seen from our gîte. Monte Viso, nearly a hundred miles off, was clear, and the sun set gorgeously behind the range of Mont Blanc. We passed the night comfortably—even luxuriously—in our blanket-bags, but there was little chance of sleeping, between the noise of the wind, of the thunder, and of the falling rocks. I forgave the thunder for the sake of the lightning. A more splendid spectacle than its illumination of the Matterhorn crags I do not expect to see.

We turned out at 3.30 A.M. on the 11th, and were dismayed to find that it still continued to snow. At 9 A.M. it ceased to fall, and the sun shewed itself feebly, so we packed up our baggage, and set out to try to get upon 'the shoulder.' We struggled upwards until eleven o'clock, and then it commenced to snow again. We held a council; the opinions expressed at it were unanimous against advancing, and I decided to retreat. For we had risen less than 300 feet in the past two hours, and had not even arrived at the rope which Tyndall's party left behind, attached to the rocks, in 1862. At the same rate of progression it would have taken us from four to five hours to get upon 'the shoulder.' Not one of us cared to attempt to go so under the existing circumstances; for besides having to move our own weight, which was sufficiently troublesome at this part of the ridge, we had to transport much heavy baggage, tent, blankets, and provisions, ladder, and 450 feet of rope, besides many other smaller matters. These, however, were not the most serious considerations. Supposing that we got upon 'the shoulder,' we might find ourselves detained there several days, unable either to go up or down.[1] I could not risk any such deten-

[1] Since then several persons have found themselves in this predicament for five or six consecutive days!

tion, being under obligations to appear in London at the end of the week.

We returned to Breuil in the course of the afternoon. It was quite fine there, and the tenants of the inn received our statements with evident scepticism. They were astonished to learn that we had been exposed to a snow-storm of twenty-six hours' duration. "Why," said Favre, the innkeeper, "*we* have had no snow; it has been fine all the time you have been absent, and there has been only that small cloud upon the mountain." Ah! that small cloud! None except those who have had experience of it can tell what a formidable obstacle it is.

I arrived at Châtillon at midnight on the 11th, defeated and disconsolate; but, like a gambler who loses each throw, only the more eager to have another try, to see if the luck would change; and returned to London ready to devise fresh combinations, and to form new plans.

Abandonment of the South-West Ridge.—All of my attempts up to this time, as well as those made by the chasseurs of Val Tournanche, Mr. Hawkins, and Prof. Tyndall, had been made by way of the south-west ridge. Why abandon a route which had been shewn to be feasible up to a certain point? I gave it up for four reasons. 1. On account of a growing disinclination for *arêtes*, and preference for snow, or rock-faces. 2. Because I was persuaded that meteorological disturbances were likely to baffle us again and again on the southern side of the mountain. 3. Because I found that the east face was a gross imposition—it looked not far from perpendicular, while its angle was, in fact, scarcely more than 40°. 4. Because I observed for myself that the strata of the mountain dipped to the west-south-west. Let us consider, first, why most persons receive such an exaggerated impression of the steepness of the eastern face.

When one looks at the Matterhorn from Zermatt, the mountain is regarded (nearly) from the north-east. The face that fronts the east is consequently neither seen in profile nor in full front, but almost half-way between the two; it looks, therefore, more steep than it really is. The majority of those who visit Zermatt go up to the Riffelberg, or to the Gornergrat, and from these places the mountain naturally looks still more precipitous, because its eastern face (which is almost all that is seen of it) is viewed more directly in front. From the Riffel hotel the slope seems to be set at an angle of 70°. If the tourist goes southwards, and crosses the Théodule pass, he gets, at one point, immediately in front of the eastern face, which then seems to be absolutely perpendicular. Comparatively few persons correct the erroneous impressions they receive in these quarters by studying the face in profile, and most go away with a very incorrect and exaggerated idea of the precipitousness of this side of the mountain, because they have considered the question from one point of view alone.

Several years passed away before I shook myself clear of my early and false impressions regarding the steepness of this side of the Matterhorn. First of all, I noticed that there were places on

this eastern face where snow remained permanently all the year round. I do not speak of snow in gullies, but of considerable slopes which are about half-way up the face. Such beds as these could not continue to remain throughout the summer, unless the snow had been able to accumulate in the winter in large masses; and snow cannot accumulate and remain in large masses, in a situation such as this, at angles much exceeding 45°. Hence I was bound to conclude that the eastern face was many degrees removed from perpendicularity; and, to be sure on this point, I went to the slopes between the Z'Muttgletscher and the Matterhorngletscher, above the châlets of Staffel, whence the face could be seen in profile. Its appearance from this direction is amazing to those who have seen it only from the east. It looks so totally different from the apparently sheer and perfectly unclimbable cliff one sees from the Riffelberg, that it is hard to believe the two slopes are one and the same thing. Its angle scarcely exceeds 40°.

A step was made when this was learnt. This knowledge alone would not, however, have caused me to try an ascent by the eastern face instead of by the south-west ridge. Forty degrees may not seem a formidable inclination, nor is it for only a small cliff. But it is very unusual to find so steep a gradient maintained continuously as the general angle of a great mountain-slope, and very few instances can be quoted from the High Alps of such an angle being preserved over a rise of 3000 feet.

I do not think that the steepness or the height of this cliff would have deterred climbers from attempting to ascend it, if it had not, in addition, looked so repulsively smooth. Men despaired of finding anything to grasp. Now, some of the difficulties of the south-west ridge came from the smoothness of the rocks, although that ridge, even from a distance, seemed to be well broken up. How much greater, then, might not have been the difficulty of climbing a face which looked smooth and unbroken close at hand?



A more serious hindrance to mounting the south-west ridge is found in the dip of its rocks to the west-south-west. The great mass of the Matterhorn, it is now well ascertained, is composed of regularly stratified rocks,[1] which rise towards the east. It has been mentioned, more than once, that the rocks on some portions of the ridge leading from the Col du Lion towards the summit dip outwards, and that fractured edges overhang. This is shewn in the annexed diagram, Fig. A. It will be readily understood that such an arrangement is not favourable for climbers, and that the degree of facility with which rocks can be ascended

[1] Upon this subject see the note by Signor F. Giordano in the Appendix.

that are so disposed, must depend very much upon the frequency or paucity of fissures and joints. The rocks of the south-west ridge are sufficiently provided with cracks, but if it were otherwise, their texture and arrangement would render them unassailable.

It is not possible to go a single time upon the rocks of the south-west ridge, from the Col du Lion to the foot of the Great Tower, without observing the prevalence of their outward dip, and that their fractured edges have a tendency to overhang; nor can one fail to notice it is upon this account that most of the débris, which is rent off by frost, does not remain *in situ* but pours down in showers over the surrounding cliffs.

The fact that the mountain is composed of a series of stratified beds was pointed out long ago. De Saussure remarked it, and recorded explicitly, in his *Travels* (§ 2243), that they "rose to the north-east at an angle of about 45°." Forbes noticed it also; and gave it as his opinion that the beds were "less inclined, or nearly horizontal." He added, "De Saussure is no doubt correct." The truth, I think, lies between the two.

I was acquainted with both of the above-quoted passages, but did not turn the knowledge to any practical account until I re-observed the same fact for myself. It was not until after my repulse in 1863, that I referred the peculiar difficulties of the south-west ridge to the dip of the strata; but when once persuaded that structure and not texture was the real impediment, it was reasonable to infer that the opposite side, that is to say the eastern face, might be comparatively easy. In brief, that an arrangement should be found like Fig. B, instead of like Fig. A. This trivial deduction was the key to the ascent of the Matterhorn.

The point was, Did the strata continue with a similar dip throughout the mountain? If they did, then the great eastern face, instead of being hopelessly impracticable, should be quite the reverse. In fact, it would be a great natural staircase, with steps inclining inwards; and, if it were so, its smooth aspect might be of no account, for the smallest steps, inclined in this fashion, afford good footing.

In June, 1865, when descending the Z'Muttgletscher, I brought these facts to the notice of my guides, Michel Croz, Christian Almer, and Franz Biener; but, although they readily admitted that they had been deceived as to the steepness of the eastern face, they were far from being satisfied that the slope would be easy to climb, and the two latter were averse to making an attempt upon it. I yielded to their reluctance, and went to examine an alternative route by a great gully[1] which leads from the Glacier du Mont Cervin to a point high up on the south-eastern ridge. We found that this gully was afflicted by falling rocks,[2] and unanimously agreed that it was not a suitable route. My renewed proposition to attack the eastern face did not find favour.

The men clustered together, and advocated leaving the mountain alone. Almer asked, with more point than politeness, "Why don't you try to go up a mountain which *can* be ascended?" "It is impossible," chimed in Biener.

[1] Marked F on the Map of the Matterhorn and its Glaciers, and on the outline upon p. 43.

[2] See *Scrambles amongst the Alps*, chap. xv.

"Sir," said Croz, "if we cross to the other side we shall lose three days, and very likely shall not succeed. You want to make ascents in the chain of Mont Blanc, and I believe they can be made. But I shall not be able to make them with you if I spend these days here, for I must be at Chamonix on the 27th." There was force in what he said, and his words made me hesitate. I relied upon his strong arms for some work which it was expected would be unusually difficult. Snow began to fall; that settled the matter, and I gave the word to retreat. We went back to Breuil, and on to the village of Val Tournanche, where we slept; and the next day proceeded to Châtillon, and thence up the Valley of Aosta to Courmayeur.

I cannot but regret that the counsels of the guides prevailed. If Croz had not uttered his well-intentioned words, he might still have been living. He parted from us at Chamonix at the appointed time, but by a strange chance we met again at Zermatt three weeks later, and two days afterwards he perished before my eyes on the very mountain from which we turned away, at his advice, on the 21st of June.

On the 7th of July, 1865,[1] I crossed the Va Cornère pass, in company with Christian Almer and Franz Biener, *en route* for Breuil. My thoughts were fixed on the Matterhorn, and my guides knew that I wished them to accompany me. They had an aversion to the mountain, and repeatedly expressed their belief that it was useless to try to ascend it. "*Anything* but Matterhorn, dear sir!" said Almer; "*anything* but Matterhorn." He did not speak of difficulty or of danger, nor was he shirking *work*. He offered to go *anywhere;* but he entreated that the Matterhorn should be abandoned. Both men spoke fairly enough. They did not think that an ascent could be made; and for their own credit, as well as for my sake, they did not wish to undertake a business which, in their opinion, would only lead to loss of time and money.

I sent them on to Breuil, and walked down to Val Tournanche to look for Jean-Antoine Carrel. He was not there. The villagers said that he, and three others, had started on the 6th to try the Matterhorn by the old way, on their own account. They will have no luck, I thought, for the clouds were low down on the mountains; and I walked up to Breuil, fully expecting to meet them. Nor was I disappointed. About half-way up I saw a group of men clustered around a châlet upon the other side of the torrent, and, crossing over, found that the party had returned. Jean-Antoine and Cæsar were there, C. E. Gorret, and J.-J. Maquignaz. They had had no success. The weather, they said, had been horrible, and they had scarcely reached the Glacier du Lion.

I explained the situation to Carrel, and proposed that we, with Cæsar and another man, should cross the Théodule by moonlight on the 9th, and that upon the 10th we should pitch the tent as high as possible upon the east face. He was unwilling to abandon the old route, and urged me to try it again. I promised to do so provided the new route failed. This satisfied him, and he agreed to my

[1] Having in the interim ascended the Grandes Jorasses and crossed the Col Dolent with Croz, Almer and Biener; and ascended the Aiguille Verte and the Ruinette, and crossed the Col de Talèfre with Almer and Biener only. See *Scrambles amongst the Alps*, chaps. xvi-xx.

proposal. I then went up to Breuil, and discharged Almer and Biener — with much regret, for no two men ever served me more faithfully or more willingly. On the next day they crossed to Zermatt.

The 8th was occupied with preparations. The weather was stormy; and black, rainy vapours obscured the mountains. Towards evening a young man came from Val Tournanche, and reported that an Englishman was lying there, extremely ill; and on the morning of Sunday the 9th I went down the valley to look after the sick man. On my way I passed a foreign gentleman, with a mule and several porters laden with baggage. Amongst these men were Jean-Antoine and Cæsar, carrying some barometers. "Hullo!" I said, "what are you doing?" They explained that the foreigner had arrived just as they were setting out, and that they were assisting his porters. "Very well; go on to Breuil, and await me there; we start at midnight as agreed." Jean-Antoine then said that he should not be able to serve me after Tuesday the 11th, as he was engaged to travel "with a family of distinction" in the valley of Aosta. "And Cæsar?" "And Cæsar also." "Why did you not say this before?" "Because," said he, "it was not settled. The engagement is of long standing, but the *day* was not fixed. When I got back to Val Tournanche on Friday night, after leaving you, I found a letter naming the day." I could not object to the answer; still the prospect of being left guideless was provoking. They went up, and I down, the valley.

The sick man declared that he was better, though the exertion of saying as much tumbled him over on to the floor in a fainting fit. He was badly in want of medicine, and I tramped down to Châtillon to get it. It was late before I returned to Val Tournanche, for the weather was tempestuous, and rain fell in torrents. A figure passed me under the church-porch. "*Qui vive?*" "Jean-Antoine." "I thought you were at Breuil." "No, sir: when the storms came on I knew we should not start to-night, and so came down to sleep here." "Ha, Carrel!" I said; "this is a great bore. If to-morrow is not fine we shall not be able to do anything together. I have sent away my guides, relying on you; and now you are going to leave me to travel with a party of ladies. That work is not fit for *you* (he smiled, I supposed at the implied compliment); can't you send some one else instead?" "No, monsieur. I am sorry, but my word is pledged. I should like to accompany you, but I can't break my engagement." By this time we had arrived at the inn door. "Well, it is no fault of yours. Come presently with Cæsar, and have some wine." They came, and we sat up till midnight, recounting our old adventures, in the inn of Val Tournanche.

The weather continued bad upon the 10th, and I returned to Breuil. The two Carrels were again hovering about the above-mentioned châlet, and I bade them adieu. In the evening the sick man crawled up, a good deal better; but his was the only arrival. The Monday crowd[1] did not cross the Théodule, on account of the continued storms. The

[1] Tourists congregate at Zermatt upon Sundays, and large gangs and droves usually cross the Théodule pass on Mondays.

inn was lonely. I went to bed early, and was awoke the next morning by the invalid inquiring if I had "heard the news." "No; what news?" "Why," said he, "a large party of guides went off this morning to try the Matterhorn, taking with them a mule laden with provisions."

I went to the door, and with a telescope saw the party upon the lower slopes of the mountain. Favre, the landlord, stood by. "What is all this about?" I inquired, "Who is the leader of this party?" "Carrel." "What! Jean-Antoine?" "Yes; Jean-Antoine." "Is Cæsar there too?" "Yes, he is there." Then I saw in a moment that I had been bamboozled and humbugged; and learned, bit by bit, that the affair had been arranged long beforehand. The start on the 6th had been for a preliminary reconnaissance; the mule, that I passed, was conveying stores for the attack; the 'family of distinction' was Signor F. Giordano, who had just despatched the party to facilitate the way to the summit, and who, when the facilitation was completed, was to be taken to the top along with Signor Sella![1]

I was greatly mortified. My plans were upset; the Italians had clearly stolen a march upon me, and I saw that the astute Favre chuckled over my discomfiture, because the route by the eastern face, if successful, would not benefit his inn. What was to be done? I retired to my room, and soothed by tobacco, re-studied my plans, to see if it was not possible to outmanœuvre the Italians. "They have taken a mule's load of provisions." "That is *one* point in my favour, for they will take two or three days to get through the food, and, until that is done, no work will be accomplished." "How is the weather?" I went to the window. The mountain was smothered up in mist. "Another point in my favour." "They are to facilitate the way. Well, if they do that to any purpose, it will be a long job." Altogether, I reckoned that they could not possibly ascend the mountain and come back to Breuil in less than seven days. I got cooler, for it was evident that the wily ones might be outwitted after all. There was time enough to go to Zermatt, to try the eastern face, and, should it prove impracticable, to come back to Breuil before the men returned; and then, it seemed to me, as the mountain was not padlocked, one might start at the same time as the Messieurs, and yet get to the top before them.

The first thing to do was to go to Zermatt. Easier said than done. The seven men upon the mountain included the ablest mountaineers in the valley, and none of the ordinary muleteer-guides were at Breuil. Two men, at least, were wanted for my baggage, but not a soul could be found. I ran about, and sent about in all directions, but not a single porter could be obtained. One was with Carrel; another was ill; another was at Châtillon, and so forth. This, however, did not much trouble me, for it was evident that so long as the weather stopped traffic over the Théodule, it would hinder the men equally upon the Matterhorn; and I knew that directly it improved company would certainly arrive.

[1] The Italian Minister. Signor Giordano had undertaken the business arrangements for Signor Sella.

About mid-day on Tuesday the 11th a large party hove in sight from Zermatt, preceded by a nimble young Englishman, and one of old Peter Taugwalder's sons.[1] I went at once to this gentleman to learn if he could dispense with Taugwalder. He said that he could not, as they were going to recross to Zermatt on the morrow, but that the young man should assist in transporting my baggage, as he had nothing to carry. We naturally got into conversation. I told my story, and learned that the young Englishman was Lord Francis Douglas,[2] whose recent exploit—the ascent of the Gabelhorn—had excited my admiration. He brought good news. Old Peter had



LORD FRANCIS DOUGLAS.

lately been beyond the Hörnli, and had reported that he thought an ascent of the Matterhorn was possible upon that side. Almer had left Zermatt, and could not be recovered, so I determined to seek for old Peter. Lord Francis Douglas expressed a warm desire to ascend the mountain, and before long it was determined that he should take part in the expedition.

Favre could no longer hinder our departure, and lent us one of his men. We crossed the Col Théodule on Wednesday morning the 12th of July, rounded the foot of the Ober Théodulgletscher, traversed the Furggengletscher, and deposited tent, blankets, ropes,

1 Peter Taugwalder, the father, was called *old* Peter, to distinguish him from his eldest son, *young* Peter. In 1865 the father's age was about 45.

2 Brother of the late Marquis of Queensberry. An account of his ascent of the Gabelhorn, on July 7, 1865 (the first made on the final side), was found after his death amongst his papers, and was published in the *Alpine Journal*, vol. ii, pp. 221-2.

and other matters in the little chapel at the Lac Noir.[1] All four were heavily laden, for we brought across the whole of my stores from Breuil. Of rope alone there was about 600 feet. There were three kinds. First, 200 feet of Mr. Buckingham's Manilla rope; second, 150 feet of a stouter, and possibly stronger rope than the first; and third, more than 200 feet of a lighter and weaker rope than the first, of a kind that I used formerly (stout sash-line).

We descended to Zermatt, sought and engaged old Peter, and gave him permission to choose another guide. When we returned



CHAPEL AT THE LAC NOIR (1899).

to the Monte Rosa Hotel, whom should we see sitting upon the wall in front but my old *guide chef*, Michel Croz. I supposed that he had come with Mr. B——, but I learned that that gentleman had arrived in ill-health, at Chamonix, and had returned to England. Croz, thus left free, had been immediately engaged by the Rev. Charles Hudson, and they had come to Zermatt with the same object as ourselves—namely, to attempt the ascent of the Matterhorn!

Lord Francis Douglas and I dined at the Monte Rosa Hotel, and had just finished when Mr. Hudson and a friend entered the *salle à manger*. They had returned from inspecting the mountain, and some idlers in the room demanded their intentions. We heard a confirma-

[1] For route, and the others mentioned in the subsequent chapters, see the Map of the Matterhorn and its Glaciers.

tion of Croz's statement, and learned that Mr. Hudson intended to set out on the morrow at the same hour as ourselves. We left the room to consult, and agreed it was undesirable that two independent parties should be on the mountain at the same time with the same object. Mr. Hudson was therefore invited to join us, and he accepted our proposal. Before admitting his friend – Mr. Hadow – I took the precaution to inquire what he had done in the Alps, and, as well as I remember, Mr. Hudson's reply was, "Mr. Hadow has done Mont Blanc in less time than most men."[1] He then mentioned several other excursions that were unknown to me, and added, in answer to a further question, "I consider he is a sufficiently good man to go with us." Mr. Hadow was admitted, and we then went into the matter of guides. Hudson thought that Croz and old Peter would be sufficient. The question was referred to the men themselves, and they made no objection.

[1] In the *Alpine Journal*, vol. iii, pp. 75-76, Mr. T. S. Kennedy, in speaking of this ascent (which was I believe made upon the 7th of July, 1865), says that Mr. Hadow went from the Grands Mulets to the summit of Mont Blanc in less than four hours and a half, and descended from the summit to Chamonix in five hours.



A STORE-HOUSE.

CHARLES HUDSON—CAMP ON THE EAST FACE—CROZ REPORTS FAVOURABLY—ASCENT OF THE EAST FACE—CROSS TO THE NORTHERN SIDE—ARRIVAL AT SUMMIT—DISCOMFITURE OF THE ITALIANS—ASTONISHMENT AT BREUIL—MARVELLOUS PANORAMA.

WE started from Zermatt on the 13th of July 1865, at half-past 5, on a brilliant and perfectly cloudless morning. We were eight in number—Croz, old Peter and his two sons,[2] Lord F. Douglas, Hadow, Hudson,[3] and I. To ensure steady motion, one tourist and one native walked together. The youngest Taugwalder fell to my share, and the lad marched well, proud to be on the expedition, and happy to shew his powers. The wine-bags also fell to my lot to carry, and throughout the day, after each drink, I replenished them secretly with water, so that at the next halt they were found fuller than before! This was considered a good omen, and little short of miraculous.

On the first day we did not intend to ascend to any great height, and we mounted, accordingly, very leisurely; picked up the things which were left in the chapel at the Schwarzsee at 8.20, and proceeded thence along the ridge connecting the Hörnli with the Matterhorn.[4] At half-past 11 we arrived at the base of the actual peak; then quitted the ridge, and clambered to the left round some ledges, on to the eastern face. We were now fairly upon the mountain, and were astonished to find that places which from the Riffel, or even from the Furggengletscher, looked entirely impracticable, were so easy that we could *run about*.

[1] Reprinted from the Fourth Edition of *Scrambles amongst the Alps*.

[2] The two young Taugwalders were taken as porters, by desire of their father, and carried provisions amply sufficient for three days, in case the ascent should prove more troublesome than we anticipated.

[3] Charles Hudson, Vicar of Skillington in Lincolnshire, was considered by the mountaineering fraternity to be the best amateur of his time. He was the organiser and leader of the party of Englishmen who ascended Mont Blanc by the Aiguille du Goûter, and descended by the Grands Mulets route, without guides, in 1855. His long practice made him surefooted, and in that respect he was not greatly inferior to a born mountaineer. His pupil Mr. Hadow was a young man of nineteen, who had the looks and manners of a greater age. He was a rapid walker, but 1865 was his first season in the Alps. Lord Francis Douglas was about the same age as Mr. Hadow. He had had the advantage of several seasons in the Alps. He was nimble as a deer, and was becoming an expert mountaineer. Just before our meeting he had ascended the Ober Gabelhorn (with old Peter Taugwalder and Jos. Viennin).

[4] Arrived at the chapel 7.30 A.M.; left it 8.20; halted to examine route 9.30; started again 10.25, and arrived at 11.20 at the cairn made by Mr. Kennedy in 1862 (see p. 27), marked 3298 mètres upon the map of the Matterhorn and its Glaciers. (This cairn has now disappeared.) Stopped 10 min. here. From the Hörnli to this point we kept, when possible, to the crest of the ridge. The greater part of the way was quite easy, but there were a few places where the axe had to be used.

Before twelve o'clock we had found a good position for the tent, at a height of 11,000 feet.[1] Croz and young Peter went on to see what was above, in order to save time on the following morning. They cut across the heads of the snow-slopes which descended towards the Furggengletscher, and disappeared round a corner; but shortly afterwards we saw them high up on the face, moving quickly. We others made a solid platform for the tent in a well-protected spot, and then watched eagerly for the return of the men. The stones which they upset told us that they were very high, and we supposed that the way must be easy. At length, just before 3 P.M., we saw them coming down, evidently much excited. "What are they saying,



REV. CHARLES HUDSON.

Peter?" "Gentlemen, they say it is no good." But when they came near we heard a different story. "Nothing but what was good; not a difficulty, not a single difficulty! We could have gone to the summit and returned to-day easily!"

We passed the remaining hours of daylight some basking in the sunshine, some sketching or collecting; and when the sun went down, giving, as it departed, a glorious promise for the morrow, we returned to the tent to arrange for the night. Hudson made tea, I coffee, and we then retired each one to his blanket bag; the Taugwalders, Lord Francis Douglas, and myself, occupying the tent, the others remain-

[1] Thus far the guides did not once go to the front. Hudson or I led, and when any cutting was required we did it ourselves. This was done to spare the guides, and to shew them that we were in earnest. The spot at which we camped was four hours' walking from Zermatt, and is marked upon the map—CAMP (1865). It was just upon a level with the Furggengrat, and its position is indicated upon the engraving on p. 20 by a little circular white spot, in a line with the word CAMP.

ing, by preference, outside. Long after dusk the cliffs above echoed with our laughter and with the songs of the guides, for we were happy that night in camp, and feared no evil.

We assembled together outside the tent before dawn on the morning of the 14th, and started directly it was light enough to move. Young Peter came on with us as a guide, and his brother returned to Zermatt.[1] We followed the route which had been taken on the previous day, and in a few minutes turned the rib which had intercepted the view of the eastern face from our tent platform. The whole of this great slope was now revealed, rising for 3000 feet like a huge natural staircase. Some parts were more, and others were less, easy; but we were not once brought to a halt by any serious impediment, for when an obstruction was met in front it could always be turned to the right or to the left. For the greater part of the way there was, indeed, no occasion for the rope, and sometimes Hudson led, sometimes myself. At 6.20 we had attained a height of 12,800 feet, and halted for half-an-hour; we then continued the ascent without a break until 9.55, when we stopped for fifty minutes at a height of 14,000 feet. Twice we struck the N.E. ridge and followed it for some little distance,[2]—to no advantage, for it was usually more rotten and steep, and always more difficult than the face. Still, we kept near to it, lest stones perchance might fall.[3]

We had now arrived at the foot of that part which, from the Riffelberg or from Zermatt, seems perpendicular or overhanging, and could no longer continue upon the eastern side. For a little distance we ascended by snow upon the arête[4]—that is, the crest of the ridge—descending towards Zermatt, and then, by common consent, turned over to the right, or to the northern side. Before doing so we made a change in the order of ascent. Croz went first, I followed, Hudson came third: Hadow and old Peter were last. "Now," said Croz, as he led off, "now for something altogether different." The work became difficult and required caution. In some places there was little to hold, and it was desirable that those should be in front who were least likely to slip. The general slope of the mountain at this part was *less* than 40°, and snow had accumulated in, and had filled up, the interstices of the rock face, leaving only occasional fragments projecting here

[1] It was originally intended to leave both of the young men behind. We found it difficult to divide the food, and so the new arrangement was made.

[2] For track, see the outline upon p. 69.

[3] Very few stones fell during the two days I was on the mountain, and none came near us. Others who have followed the same route have not been so fortunate; they may not, perhaps, have taken the same precautions. It is a noteworthy fact, that the lateral moraine of the left bank of the Furggengletscher is scarcely larger than that of the right bank, although the former receives all the débris that falls from the 4000 feet of cliffs which form the eastern side of the Matterhorn, whilst the latter is fed by perfectly insignificant slopes. Neither of these moraines is large. This is strong evidence that stones do *not* fall to any great extent from the eastern face. The inward dip of the beds retains the detritus in place. Hence the eastern face appears, when one is upon it, to be undergoing more rapid disintegration than the other sides: in reality, the mantle of ruin spares the mountain from farther waste. Upon the southern side, rocks fall as they are rent off; "each day's work is cleared away" every day; and hence the faces and ridges are left naked, and are exposed to fresh attacks.

[4] The snow seen in the engraving upon p. 20, half-an-inch below the summit, and a little to its right. It is now called 'the Shoulder.'

and there. These were at times covered with a thin film of ice, produced from the melting and refreezing of the snow. It was a place over which any fair mountaineer might pass in safety, and Mr. Hudson ascended this part, and, so far as I know, the entire mountain, without having the slightest assistance rendered to him upon any occasion. Sometimes, after I had taken a hand from Croz, or received a pull, I turned to offer the same to Hudson; but he invariably declined, saying it was not necessary. Mr. Hadow, however, was not accustomed to this kind of work, and required continual assistance. It is only fair to say that the difficulty which he found at this part arose simply and entirely from want of experience.

This solitary difficult part was of no great extent.[1] We bore away over it at first, nearly horizontally, for a distance of about 400 feet; then ascended directly towards the summit for about 60 feet; and then doubled back to the ridge which descends towards Zermatt. A long stride round a rather awkward corner brought us to snow once more. The last doubt vanished! The Matterhorn was ours! Nothing but 200 feet of easy snow remained to be surmounted:

You must now carry your thoughts back to the seven Italians who started from Breuil on the 11th of July. Four days had passed since their departure, and we were tormented with anxiety lest they should arrive on the top before us. All the way up we had talked of them, and many false alarms of "men on the summit" had been raised. The higher we rose, the more intense became the excitement. What if we should be beaten at the last moment? The slope eased off, at length we could be detached, and Croz and I, dashing away, ran a neck-and-neck race, which ended in a dead heat. At 1.40 P.M. the world was at our feet, and the Matterhorn was conquered. Hurrah! Not a footstep could be seen.

It was not yet certain that we had not been beaten. The summit of the Matterhorn was formed of a rudely level ridge, about 350 feet long,[2] and the Italians might have been at its farthest extremity. I hastened to the southern end, scanning the snow right and left eagerly. Hurrah! again; it was untrodden. "Where were the men?" I peered over the cliff, half doubting, half expectant, and saw them immediately—mere dots on the ridge, at a great distance below. Up went my arms and my hat. "Croz! Croz!! come here!" "Where are they, Monsieur?" "There, don't you see them, down there?" "Ah! the *coquins*, they are low down." "Croz, we must make those fellows hear us." We yelled until we were hoarse. The Italians seemed to regard us—we could not be certain. "Croz, we *must* make them hear us; they *shall* hear us!" I seized a block of rock and hurled it down, and called upon my companion, in the name of friend-

[1] I have no memorandum of the time that it occupied. It must have taken about an hour and a half.

[2] The highest points are towards the two ends. In 1865 the northern end was slightly higher than the southern one. In bygone years Carrel and I often suggested to each other that we might one day arrive upon the top, and find ourselves cut off from the very highest point by a notch in the summit-ridge which is seen from the Théodule and from Breuil (marked G on the outline on p. 43). This notch is very conspicuous from below, but when one is actually upon the summit it is hardly noticed, and it can be passed without the least difficulty.

ship, to do the same. We drove our sticks in, and prized away the crags, and soon a torrent of stones poured down the cliffs. There was no mistake about it this time. The Italians turned and fled.[1]

The others had arrived, so we went back to the northern end of the ridge. Croz now took the tent-pole,[2] and planted it in the highest snow. "Yes," we said, "there is the flag-staff, but where is the flag?" "Here it is," he answered, pulling off his blouse and fixing it to the stick. It made a poor flag, and there was no wind to float it out, yet it was seen all around. They saw it at Zermatt—at the Riffel—in the Val Tournanche. At Breuil, the watchers cried, "Victory is ours!" They raised 'bravos' for Carrel, and 'vivas' for Italy, and hastened to put themselves *en fête*. On the morrow they were undeceived. "All was changed; the explorers returned sad—cast down—disheartened—confounded—gloomy." "It is true," said the men. "We saw them ourselves—they hurled stones at us! The old traditions *are* true,—there are spirits on the top of the Matterhorn!"[3]

We returned to the southern end of the ridge to build a cairn, and then paid homage to the view.[4] The day was one of those superlatively calm and clear ones which usually precede bad weather. The atmosphere was perfectly still, and free from all clouds or vapours. Mountains fifty—nay a hundred—miles off, looked sharp and near. All their details—ridge and crag, snow and glacier—stood out with faultless definition. Pleasant thoughts of happy days in bygone years came up unbidden, as we recognised the old, familiar forms. All were revealed—not one of the principal peaks of the Alps was hidden. I see them clearly now—the great inner circles of

[1] I learnt afterwards from J.-A. Carrel that they heard our first cries. They were then upon the south-west ridge, close to the 'Cravate,' and *twelve hundred and fifty* feet below us; or, as the crow flies, at a distance of about one-third of a mile.

[2] At our departure the men were confident that the ascent would be made, and took one of the poles out of the tent. I protested that it was tempting Providence; they took the pole nevertheless.

[3] Signor Giordano was naturally disappointed at the result, and wished the men to start again. *They all refused to do so, with the exception of Jean-Antoine.* Upon the 16th of July he set out again with three others, and upon the 17th gained the summit by passing (at first) up the south-west ridge, and (afterwards) by turning over to the Z'Mutt, or north-western side. On the 18th he returned to Breuil.

Whilst we were upon the southern end of the summit-ridge, we paid some attention to the portion of the mountain which intervened between ourselves and the Italian guides. It seemed as if there would not be the least chance for them if they should attempt to storm the final peak directly from the end of the 'shoulder.' In that direction cliffs fell sheer down from the summit, and we were unable to see beyond a certain distance. There remained the route about which Carrel and I had often talked, namely, to ascend directly at first from the end of the 'shoulder,' and afterwards to swerve to the left—that is, to the Z'Mutt side—and to complete the ascent from the north-west. When we were upon the summit we laughed at this idea. Nevertheless, the summit was reached by that route by the undaunted Carrel. From knowing the final slope over which he passed, and from the account of Mr. F. C. Grove—who until 1895 was the only traveller by whom it had been traversed—I do not hesitate to term the ascent of Carrel and Bich in 1865 the most desperate piece of mountain-scrambling upon record. In 1869 I asked Carrel if he had ever done anything more difficult. His reply was, "Man cannot do anything much more difficult than that!"

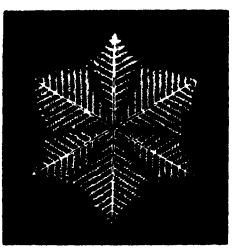
[4] The summit-ridge was much shattered, although not so extensively as the south-west and north-east ridges. The highest rock, in 1865, was a block of mica-schist, and the fragment I broke off it not only possesses, in a remarkable degree, the *character* of the peak, but mimics, in an astonishing manner, the details of its form. [See illustration on page 63.]

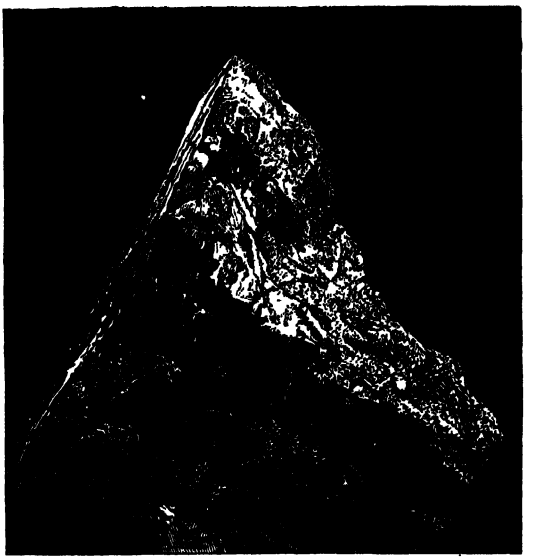
giants, backed by the ranges, chains, and *massifs*. First came the Dent Blanche, hoary and grand; the Gabelhorn and pointed Rothhorn; and then the peerless Weisshorn: the towering Mischabelhörner, flanked by the Allalinhorn, Strahlhorn, and Rimpfischhorn; then Monte Rosa—with its many Spitzes—the Lyskamm and the Breithorn. Behind were the Bernese Oberland, governed by the Finsteraarhorn; the Simplon and St. Gothard groups; the Disgrazia and the Orteler. Towards the south we looked down to Chivasso on the plain of Piedmont, and far beyond. The Viso—one hundred miles away—seemed close upon us; the Maritime Alps—one hundred and thirty miles distant—were free from haze. Then came my first love—the Pelvoux; the Ecrins and the Meije; the clusters of the Graians; and lastly, in the west, glowing in full sunlight, rose the monarch of all—Mont Blanc. Ten thousand feet beneath us were the green fields of Zermatt, dotted with châlets, from which blue smoke rose lazily. Eight thousand feet below, on the other side, were the pastures of Breuil. There were forests black and gloomy, and meadows bright and lively; bounding waterfalls and tranquil lakes; fertile lands and savage wastes; sunny plains and frigid *plateaux*. There were the most rugged forms, and the most graceful outlines—bold, perpendicular cliffs, and gentle, undulating slopes; rocky mountains and snowy mountains, sombre and solemn, or glittering and white, with walls—turrets—pinnacles—pyramids—domes—cones—and spires! There was every combination that the world can give, and every contrast that the heart could desire.

We remained on the summit for one hour—

"One crowded hour of glorious life."

It passed away too quickly, and we began to prepare for the descent.





THE ACTUAL SUMMIT OF THE MATTERHORN IN 1865.

CHAPTER IV.

DESCENT OF THE MATTERHORN.

ORDER OF THE DESCENT—A FRIGHTFUL AVALANCHE—HADOW SLIPS—DEATH OF CROZ, HADOW, HUDSON AND LORD F. DOUGLAS—TERROR OF THE TAUGWALDERS—AN APPARITION—AN INFAMOUS PROPOSITION—SURPRISED BY NIGHT—SEARCH FOR AND RECOVERY OF THE BODIES—OFFICIAL EXAMINATION—THEIR LAST RESTING-PLACE.

HUDSON and I again consulted as to the best and safest arrangement of the party. We agreed that it would be best for Croz to go first,[1] and Hadow second; Hudson, who was almost equal to a born mountaineer in sureness of foot, wished to be third; Lord Francis Douglas was placed next, and old Peter, the strongest of the remainder, after him. I suggested to Hudson that we should attach a rope to the rocks on our arrival at the difficult bit, and hold it as we descended, as an additional protection. He approved the idea, but it was not definitely settled that it should be done. The party was being arranged in the above order whilst I was sketching the summit, and they had finished, and were waiting for

[1] If the members of the party had been more equally efficient, Croz would have been placed *last*.

me to be tied in line, when some one remembered that our names had not been left in a bottle. They requested me to write them down, and moved off while it was being done.

A few minutes afterwards I tied myself to young Peter, ran down after the others, and caught them just as they were commencing the descent of the difficult part.[1] Great care was being taken. Only one man was moving at a time; when he was firmly planted the next advanced, and so on. They had not, however, attached the additional rope to rocks, and nothing was said about it. The suggestion was not made for my own sake, and I am not sure that it even occurred to me again. For some little distance we two followed the others, detached from them, and should have continued so had not Lord Francis Douglas asked me, about 3 P.M., to tie on to old Peter, as he feared, he said, that Taugwalder would not be able to hold his ground if a slip occurred.

A few minutes later, a sharp-eyed lad ran into the Monte Rosa hotel, to Seiler, saying that he had seen an avalanche fall from the summit of the Matterhorn on to the Matterhorngletscher. The boy was reproved for telling idle stories; he was right, nevertheless, and this was what he saw.

Michel Croz had laid aside his axe, and in order to give Mr. Hadow greater security, was absolutely taking hold of his legs, and putting his feet, one by one, into their proper positions.[2] So far as I know, no one was actually descending. I cannot speak with certainty, because the two leading men were partially hidden from my sight by an intervening mass of rock, but it is my belief, from the movements of their shoulders, that Croz, having done as I have said, was in the act of turning round, to go down a step or two himself; at this moment Mr. Hadow slipped, fell against him, and knocked him over. I heard one startled exclamation from Croz, then saw him and Mr. Hadow flying downwards; in another moment Hudson was dragged from his steps, and Lord F. Douglas immediately after him.[3] All

[1] Described upon pp. 59-60.

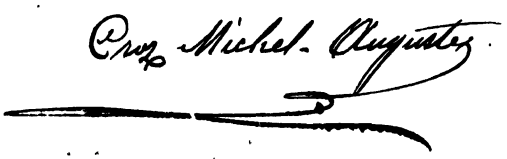
[2] Not at all an unusual proceeding, even between born mountaineers. I wish to convey the impression that Croz was using all pains, rather than to indicate inability on the part of Mr. Hadow. The insertion of the word 'absolutely' makes the passage, perhaps, rather ambiguous. I retain it now, in order to offer the above explanation.

[3] At the moment of the accident, Croz, Hadow, and Hudson, were close together. Between Hudson and Lord F. Douglas the rope was all but taut, and the same between all the others who were *above*. Croz was standing by the side of a rock which afforded good hold, and if he had been aware, or had suspected, that anything was about to occur, he might and would have gripped it, and would have prevented any mischief. He was taken totally by surprise. Mr. Hadow slipped off his feet on to his back, his feet struck Croz in the small of the back, and knocked him right over, head first. Croz's axe was out of his reach, and without it he managed to get his head uppermost before he disappeared from our sight. If it had been in his hand I have no doubt that he would have stopped himself and Mr. Hadow.

Mr. Hadow, at the moment of the slip, was not occupying a bad position. He could have moved either up or down, and could touch with his hand the rock of which I have spoken. Hudson was not so well placed, but he had liberty of motion. The rope was not taut from him to Hadow, and the two men fell ten or twelve feet before the jerk came upon him. Lord F. Douglas was not favourably placed, and could neither move up nor down. Old Peter was firmly planted, and stood just beneath a large rock which he hugged with both arms. I enter into these details to make it more apparent that the position occupied by the party at the moment of the accident was not by any means

this was the work of a moment. Immediately we heard Croz's exclamation, old Peter and I planted ourselves as firmly as the rocks would permit:[1] the rope was taut between us, and the jerk came on





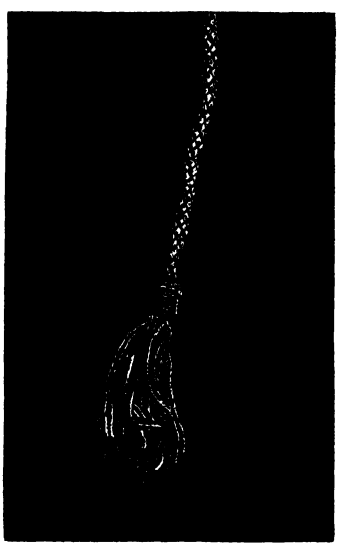
us both as on one man. We held; but the rope broke midway between Taugwalder and Lord Francis Douglas. For a few seconds we saw

excessively trying. We were compelled to pass over the exact spot where the slip occurred, and we found—even with shaken nerves—that *it* was not a difficult place to pass. I have described the *slope generally* as difficult, and it is so undoubtedly to most persons; but it must be distinctly understood that Mr. Hadow slipped at a comparatively easy part.

[1] Or, more correctly, our position.

our unfortunate companions sliding downwards on their backs, and spreading out their hands, endeavouring to save themselves. They passed from our sight uninjured, disappeared one by one, and then fell from precipice to precipice on to the Matterhorngletscher below, a distance of nearly 4000 feet in height. From the moment the rope broke it was impossible to help them.

So perished our comrades! For the space of half-an-hour we remained on the spot without moving a single step. The two men, paralysed by terror, cried like infants, and trembled in such a manner as to threaten us with the fate of the others. Old Peter rent the air with exclamations of "Chamonix! Oh, what will Chamonix say?" He meant, Who would believe that Croz could fall? The young man did nothing but scream or sob, "We are lost! we are lost!" Fixed between the two, I could neither move up nor down. I begged young Peter to descend, but he dared not. Unless he did, we could not advance. Old Peter became alive to the danger, and swelled the cry, "We are lost! we are lost!" The father's fear was natural—he trembled for his son; the young man's fear was cowardly—he thought of self alone. At last old Peter summoned up courage, and changed his position to a rock to which he could fix the rope: the young man then descended, and we all stood together. Immediately we did so, I asked for the rope which had given way, and found, to my surprise—indeed, to my horror—that it was the weakest of the three ropes. It was not brought, and should not have been employed, for the purpose for which it was used. It was old rope, and, compared with the others, was feeble. It was intended as a reserve, in case we had to leave much rope behind, attached to rocks. I saw at once that a serious question was involved, and made him give me the end. It had broken in mid-air, and it did not appear to have sustained previous injury.



ROPE BROKEN ON THE MATTERHORN.

For more than two hours afterwards I thought almost every moment that the next would be my last; for the Taugwalders, utterly unnerved, were not only incapable of giving assistance, but were in such a state that a slip might have been expected from them at any moment. After a time, we were able to do that which should have been done at first, and fixed rope to firm rocks, in addition to being tied together. These ropes were cut from time to time, and

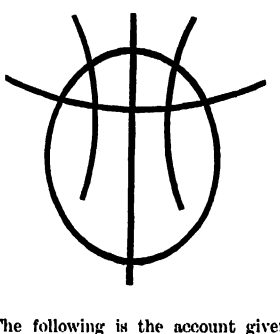
were left behind.[1] Even with their assurance the men were afraid to proceed, and several times old Peter turned with ashy face and faltering limbs, and said, with terrible emphasis, "*I cannot!*"

About 6 P.M. we arrived at the snow upon the ridge descending towards Zermatt, and all peril was over. We frequently looked, but in vain, for traces of our unfortunate companions; we bent over the ridge and cried to them, but no sound returned. Convinced at last that they were neither within sight nor hearing, we ceased from our useless efforts; and, too cast down for speech, silently gathered up our things, and the little effects of those who were lost, preparatory to continuing the descent. When, lo! a mighty arch appeared, rising above the Lyskamm, high into the sky. Pale, colourless, and noiseless, but perfectly sharp and defined, except where it was lost in the clouds, this unearthly apparition seemed like a vision from another world; and, almost appalled, we watched with amazement the gradual development of two vast crosses, one on either side. If the Taugwalders had not been the first to perceive it, I should have doubted my senses. They thought it had some connection with the accident, and I, after a while, that it might bear some relation to ourselves. But our movements had no effect upon it. The spectral forms remained motionless. It was a fearful and wonderful sight; unique in my experience, and impressive beyond description, coming at such a moment.[2]

[1] These ends, for a long time, remained attached to the rocks, and marked our line of ascent and descent.

[2] I paid very little attention to this remarkable phenomenon, and was glad when it disappeared, as it distracted our attention. Under ordinary circumstances I should have felt vexed afterwards at not having observed with greater precision an occurrence so rare and so wonderful. I can add very little about it to that which is said above. The sun was directly at our backs; that is to say, the fog-bow was opposite to the sun. The time was 6.30 P.M. The forms were at once tender and sharp; neutral in tone; were developed gradually, and disappeared suddenly. The mists were light (that is, not dense), and were dissipated in the course of the evening.

It has been suggested that the crosses are incorrectly figured in the Frontispiece of *Scrambles amongst the Alps*, and that they were probably formed by the intersection of other circles or ellipses, as shewn in the annexed diagram. I think this suggestion is very likely correct; but in the Frontispiece I have preferred to follow my original memorandum.



In Parry's *Narrative of an Attempt to reach the North Pole*, 4to, 1828, there is, at pp. 99-100, an account of the occurrence of a phenomenon analogous to the above-mentioned one. "At half-past five P.M. we witnessed a very beautiful natural phenomenon. A broad white fog-bow first appeared opposite to the sun, as was very commonly the case," etc. I follow Parry in using the term fog-bow.

It may be observed that, upon the descent of the Italian guides (whose expedition is noticed in the note upon pp. 73-4), upon July 17th, 1865, the phenomenon commonly termed the Brocken was observed. The following is the account given by the Abbé Amé Gorret in the *Feuille d'Aoste*, October 31, 1865:—"Nous étions sur l'épaule" (the 'shoulder') "quand nous remarquâmes un phénomène qui nous fit plaisir; le nuage était très-dense du côté de Valtornanche, c'était serein en Suisse; nous nous vimes au milieu d'un cercle aux couleurs de l'arc-en-ciel; ce mirage nous formait à tous une couronne au milieu de laquelle nous voyions notre ombre." This occurred at about 6.30 to 7 P.M., and the Italians in mention were at about the same height as ourselves—namely, 14,000 feet.

I was ready to leave, and waiting for the others. They had recovered their appetites and the use of their tongues. They spoke in patois, which I did not understand. At length the son said in French, "Monsieur." "Yes." "We are poor men; we have lost our Herr; we shall not get paid; we can ill afford this."[1] "Stop!" I said, interrupting him, "that is nonsense; I shall pay you, of course, just as if your Herr were here." They talked together in their patois for a short time, and then the son spoke again. "We don't wish you to pay us. We wish you to write in the hotel-book at Zermatt, and to your journals, that we have not been paid." "What nonsense are you talking? I don't understand you. What do you mean?" He proceeded—"Why, next year there will be many travellers at Zermatt, and we shall get more *voyageurs*."[2]

Who would answer such a proposition? I made them no reply in words,[3] but they knew very well the indignation that I felt. They filled the cup of bitterness to overflowing, and I tore down the cliff, madly and recklessly, in a way that caused them, more than once, to inquire if I wished to kill them. Night fell; and for an hour the descent was continued in the darkness. At half-past 9 a resting-place was found, and upon a wretched slab, barely large enough to hold the three, we passed six miserable hours. At daybreak the descent was resumed, and from the Hörnli ridge we ran down to the châlets of Buhl, and on to Zermatt. Seiler met me at his door, and followed in silence to my room. "What is the matter?" "The Taugwalders and I have returned." He did not need more, and burst into tears; but lost no time in useless lamentations, and set to work to arouse the village. Ere long a score of men had started to ascend the Hohlicht heights, above Kalbermatt and Z'Mutt, which commanded the plateau of the Matterhorngletscher. They returned after six hours, and reported that they had seen the bodies lying motionless on the snow. This was on Saturday; and they proposed that we should leave on Sunday evening, so as to arrive upon the plateau at daybreak on Monday. Unwilling to lose the slightest chance, the Rev. J. M'Cormick and I resolved to start on Sunday morning. But as M. le Curé Ruden required the Zermatt men to attend the early Mass they were unable to accompany us, and to several of them, at least, this was a severe trial. Peter Perrn declared with tears that nothing else would have prevented him from joining in the search for his old comrades. Englishmen came to our aid. The Rev. J. Robertson[4] and Mr. J. Phillpotts[5] offered themselves, and their guide Franz Andermatten; another Englishman lent us Joseph Marie and Alexandre Lochmatter. Frédéric Payot, and Jean Tairraz, of Chamonix, also volunteered.

We started at 2 A.M. on Sunday the 16th, and followed the route

[1] They had been travelling with, and had been engaged by, Lord F. Douglas, and so considered him their employer, and responsible to them.

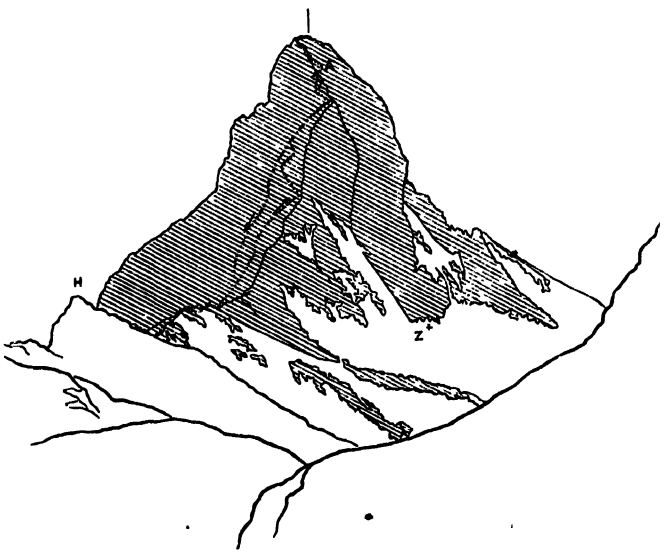
[2] Transcribed from the original memorandum.

[3] Nor did I speak to them afterwards, unless it was absolutely necessary, so long as we were together.

[4] Now Vicar of Whittlesford.

[5] The present Head Master of Bedford School.

that we had taken on the previous Thursday as far as the Hörnli. Thence we went down to the right of the ridge,[1] and mounted through the *séracs* of the Matterhorngletscher. By 8.30 we had got to the plateau at the top of the glacier, and within sight of the corner in which we knew my companions must be.[2] As we saw one weather-beaten man after another raise the telescope, turn deadly pale, and pass it on without a word to the next, we knew that all hope was gone. We approached. They had fallen below as they had fallen above—Croz a little in advance, Hadow near him, and



H THE HORNLI. A. PLACE WHERE HADOW SLIPPED
Z. PLACE WHERE THE BODIES WERE FOUND.

Hudson some distance behind; but of Lord Francis Douglas we could see nothing.[3] We left them where they fell: buried in snow at the base of the grandest cliff of the most majestic mountain of the Alps.

All those who had fallen had been tied with the Manilla, or with the second and equally strong rope, and, consequently, there had been only one link—that between old Peter and Lord Francis Douglas—where the weaker rope had been used. This had a very ugly look for Taugwalder, for it was not possible to suppose that the others would have sanctioned the employment of a rope so greatly inferior in strength when there were more than two hundred and fifty feet

[1] To the point marked Z on the map. [2] Marked with a cross on the map.

[3] A pair of gloves, a belt, and boot that had belonged to him were found. This, somehow, became publicly known, and gave rise to wild notions, which would not have been entertained had it been also known that the *whole* of the boots of those who had fallen *were off*, and were lying upon the snow near the bodies.

of the better qualities still remaining out of use.[1] For the sake of the old guide (who bore a good reputation), and upon all other accounts, it was desirable that this matter should be cleared up; and after my examination before the court of inquiry which was instituted by the Government was over, I handed in a number of questions which were framed so as to afford old Peter an opportunity of exculpating himself from the grave suspicions which at once fell upon him. The questions, I was told, were put and answered; but the answers, although promised, have never reached me.[2]

Meanwhile, the administration sent strict injunctions to recover the bodies, and upon the 19th of July, twenty-one men of Zermatt accomplished that sad and dangerous task.[3] Of the body of Lord Francis Douglas they, too, saw nothing; it was probably still arrested on the rocks above.[4] The remains of Hudson and Hadow were interred upon the north side of the Zermatt Church, in the presence of a reverent crowd of sympathising friends. The body of Michel Croz lies upon the other side, under a simpler tomb; whose inscription bears honourable testimony to his rectitude, to his courage, and to his devotion.[5]

So the traditional inaccessibility of the Matterhorn was vanquished, and was replaced by legends of a more real character. Others will essay to scale its proud cliffs, but to none will it be the mountain that it was to its early explorers. Others may tread its summit-snows, but none will ever know the feelings of those who first gazed

[1] I was one hundred feet or more from the others whilst they were being tied up, and am unable to throw any light on the matter. Croz and old Peter no doubt tied up the others.

[2] This was not the only occasion upon which M. Clemenz (who presided over the inquiry) failed to give up answers that he promised. It is greatly to be regretted that he did not feel that the suppression of the truth was equally against the interests of travellers and of the guides. If the men were untrustworthy, the public should have been warned of the fact; but if they were blameless, why allow them to remain under unmerited suspicion?

Old Peter Taugwalder laboured for a long time under an unjust accusation. Notwithstanding repeated denials, even his comrades and neighbours at Zermatt persisted in asserting or insinuating that he *cut* the rope which led from him to Lord Francis Douglas. In regard to this infamous charge, I say that he *could* not do so at the moment of the slip, and that the end of the rope in my possession shews that he did not do so beforehand. There remains, however, the suspicious fact that the rope which broke was the thinnest and weakest one that we had. It is suspicious, because it is unlikely that any of the four men in front would have selected an old and weak rope when there was abundance of new, and much stronger, rope to spare; and, on the other hand, because if Taugwalder thought that an accident was likely to happen, it was to his interest to have the weaker rope where it was placed.

I should rejoice to learn that his answers to the questions which were put to him were satisfactory. Not only was his act at the critical moment wonderful as a feat of strength, but it was admirable in its performance at the right time. He left Zermatt, and lived for several years in retirement in the United States; but ultimately returned to his native valley, and died suddenly on July 11, 1888, at the Lac Noir (Schwarzsee).

[3] They followed the route laid down upon the map, and on their descent were in great peril from the fall of a *serac*.

[4] This, or a subsequent, party discovered a sleeve. No other traces have been found.

[5] At the instance of Mr. Alfred (now Mr. Justice) Wills, a subscription list was opened for the benefit of the sisters of Michel Croz, who had been partly dependent upon his earnings. In a short time more than £280 were raised. This was considered sufficient, and the list was closed. The proceeds were invested in French Rentes (by Mr. William Mathews), at the recommendation of M. Dupui, at that time Maire of Chamonix.

upon its marvellous panorama; and none, I trust, will ever be compelled to tell of joy turned into grief, and of laughter into mourning. It proved to be a stubborn foe; it resisted long, and gave many a hard blow; it was defeated at last with an ease that none could have anticipated, but, like a relentless enemy—conquered but not crushed—it took terrible vengeance. The time may come when the Matterhorn shall have passed away, and nothing, save a heap of shapeless fragments, will mark the spot where the great mountain stood; for atom by atom, inch by inch, and yard by yard, it yields to forces which nothing can withstand. That time is far distant; and, ages hence, generations unborn will gaze upon its awful precipices, and wonder at its unique form. However exalted may be their ideas and however exaggerated their expectations, none will come to return disappointed!



THE GRAVE OF MICHEL CROZ

CHAPTER V.

SUBSEQUENT HISTORY OF THE MATTERHORN.[1]

FIRST ASCENT ON THE ITALIAN SIDE—COMPARISON OF THE TWO ROUTES—HUT ON THE '*CRAVATE*'—MR. CRAUFURD GROVE'S ASCENT—CONSTRUCTION OF THE HUT ON THE EAST FACE—CABANE ON THE HÖRNLI RIDGE—ALTERATION IN THE FORM OF THE SUMMIT—DEATH OF JOSEPH BRANTSCHEN—DR. MOSELEY FALLS DOWN THE EAST FACE—ASCENTS FROM THE NORTH-WEST BY MESSRS. MUMMERY AND PENHALL—ABANDONMENT AND DEATH OF MR. BORCKHARDT—ANOTHER CATASTROPHE ON THE EAST FACE—DEATH OF JEAN-ANTOINE CARREL—LOSS OF ANDREAS SEILER AND JOSEPH BIENER.

THE Val Tournanche natives who started to facilitate the way up the south-west ridge of the Matterhorn for MM. Giordano and Sella, pitched their tent upon my third platform, at the foot of the Great Tower (12,992 feet), and enjoyed several days of bad weather under its shelter. On the first fine day (13th of July) they began their work, and about mid-day on the 14th got on to the 'shoulder,' and arrived at the base of the final peak (the point where Bennen stopped on July 28, 1862). The counsels of the party were then divided. Two—Jean-Antoine Carrel and J.-Joseph Maquignaz—wished to go on; the others were not eager about it. A discussion took place, and the result was they all commenced to descend, and whilst upon the 'cravate' (13,524) they heard our cries from the summit.[2] Upon the 15th they went down to Breuil and reported their ill-success to M. Giordano (see p. 61). That gentleman was naturally much disappointed, and pressed the men to set out again.[3] Said he, "Until now I have striven for the honour of making the first ascent,—fate has decided against me,—I am beaten. Patience! Now, if I go to any further expense, it will be on your account, for your honour, and for your interests. Will you start again to settle the question, or, at least, to let there be no more uncertainty?" The majority of the men (in fact the whole of them with the exception of Jean-Antoine) refused point-blank to have anything more to do with the mountain. Carrel, however, stepped forward, saying, "As for me, I have not given it up; if you (turning to the Abbé Gorret) or the

[1] We resume here the account of the proceedings of the Italians who started from Breuil on the 11th of July, 1865. See p. 53.

[2] The foregoing particulars were related to me by J.-A. Carrel.

[3] The following details are taken from the account of the Abbé Amé Gorret (published in the *Feuille d'Aoste*, Oct. 1865), who was at Breuil when the men returned.

others will come, I will start again immediately." "Not I!" said one. "No more for me," cried a second. "If you would give me a thousand francs I would not go back," said a third. The Abbé Gorret alone volunteered. This plucky priest was concerned in the very first attempts upon the mountain, and is an enthusiastic mountaineer. Carrel and the Abbé would have set out by themselves had not J.-B. Bich and J.-A. Meynet (two men in the employ of Favre the innkeeper) come forward at the last moment. M. Giordano also wished to accompany them, but the men knew the nature of the work they had to undertake, and positively declined to be accompanied by an amateur.

These four men left Breuil at 6.30 A.M. on July 16, at 1 P.M. arrived at the third tent-platform, and there passed the night. At daybreak on the 17th they continued the ascent by the route which had been taken before; passed successively the Great Tower, the 'crête du coq,' the 'cravate,' and the 'shoulder,'[1] and at 10 A.M. gained the point at the foot of the final peak from which the explorers had turned back on the 14th. They had then about 800 feet to accomplish, and, says the Abbé, "nous allions entrer en pays inconnu, aucun n'étant jamais allé aussi loin."

The passage of the cleft which stopped Bennen was accomplished, and then the party proceeded directly towards the summit, over rocks which for some distance were not particularly difficult. The steep cliffs down which we had hurled stones (on the 14th) then stopped their way, and Carrel led round to the left or Z'Mutt side. The work at this part was of the very greatest difficulty, and stones and icicles which fell rendered the position of the party very precarious;[2] so much so that they preferred to turn up directly towards the summit, and climb by rocks that the Abbé termed "almost perpendicular." He added, "This part occupied the most time, and gave us the greatest trouble." At length they arrived at a fault in the rocks which formed a roughly horizontal gallery. They crept along this in the direction of a ridge that descended towards the north-west, or therealbouts, and when close to the ridge, found that they could not climb on to it; but they perceived that, by descending a gully with perpendicular sides, they could reach the ridge at a lower point. The bold Abbé was the heaviest and the strongest of the four, and he was sacrificed for the success of the expedition. He and Meynet remained behind, and lowered the others, one by one, into the gully. Carrel and Bich clambered up the other side, attained the ridge descending towards the north-west, shortly afterwards gained an "easy route,[3] they galloped," and in a few minutes reached the southern end of the summit-ridge.

[1] These terms, as well as the others, Great Staircase, Col du Lion, Tête du Lion, Chimney, and so forth, were applied by Carrel and myself to the various points, in consequence of real or supposed resemblances in the rocks to other things. A few of the terms originated with the author, but they were chiefly due to the inventive genius of J.-A. Carrel.

[2] I have seen icicles more than a hundred feet long hanging from the rocks near the summit of the Matterhorn.

[3] The words of the Abbé. I imagine that he meant *comparatively* easy.

The time of their arrival does not appear to have been noticed. It was late in the day, I believe about 3 P.M. Carrel and his comrade only waited long enough to plant a flag by the side of the cairn that we had built three days previously, then descended at once, rejoined the others, and all four hurried down as fast as possible to the tent. They were so pressed for time that they could not eat! and it was 9 P.M. before they arrived at their camp at the foot of the Great Tower. In descending they followed the gallery above mentioned throughout its entire length, and so avoided the very difficult rocks over which they had passed on the ascent. As they were traversing the length of the 'shoulder' they witnessed the phenomenon to which I have already adverted at the foot of p. 67.



J.-B. BICH, IN 1892.

When Carrel and Bich were near the summit they saw our traces upon the Matterhorngletscher, and suspected that an accident had occurred; they did not, however, hear of the Matterhorn catastrophe until their return to Breuil, at 3 P.M. upon the 18th. The details of that sad event were in the mouths of all, and it was not unnaturally supposed, in the absence of correct information, that the accident was a proof that the northern side was frightfully dangerous. The safe return of the four Italians was regarded, on the other hand, as evidence that the Breuil route was the best. Those who were interested (either personally or otherwise) in the Val Tournanche made the most of the circumstances, and trumpeted the praises of the southern route. Some went farther, and instituted comparisons between the two routes to the disadvantage of the northern one, and were pleased to term our expedition on the 13-14th of July precipitate, and so forth. Considering the circumstances which caused us to leave the Val Tournanche on the 12th of July, these remarks were not in the best possible taste, but I have no feeling regarding them. There may be some, however, who may be interested in a comparison of the two routes, and for their sakes I will place the essential points in juxtaposition. We (that is the Taugwalders and myself) were absent from Zermatt 53 hours. Excluding halts and stoppages of one sort or another, the ascent and descent occupied us 23 hours. Zermatt is 5315 feet above the level of the sea, and the Matterhorn is 14,780; we had therefore to ascend 9465 feet. As far as the point marked 10,820 feet the way was known, so we had to find the way over only 3960 feet. The members of our party (I now include all) were very unequal in ability, and none of us could for a moment be compared as cragsmen with Jean-Antoine Carrel. The four Italians

who started from Breuil on the 16th of July were absent during 36½ hours, and as far as I can gather from the published account, and from conversation with the men, excluding halts, they took for the ascent and descent 23¾ hours. The hotel at Cioment is 6890 feet above the sea, so they had to ascend 7890 feet. As far as the end of the 'shoulder,' the way was known to Carrel, and he had to find the way over only about 800 feet. All four men were born mountaineers, good climbers, and they were led by the most expert cragsman I have seen. The weather in each instance was fine. It is seen, therefore, that these four nearly equally matched men took a *longer* time to ascend 1500 feet *less* height than ourselves, although we had to find the way over more than four times as much untrodden ground



CANON CARREL, OF AOSTA.

as they. This alone would lead any mountaineer to suppose that their route must have been more difficult than ours.[1] I know the greater part of the ground over which they passed, and from my knowledge, and from the account of Mr. Grove, which follows, I am sure that their route was not only more difficult, but that it was *much* more difficult, than ours.

This was not the opinion in the Val Tournanche at the end of 1865, and the natives confidently reckoned that tourists would flock to their side in preference to the other. It was, I believe, the late Canon Carrel of Aosta (who always took great interest in such matters) who first proposed the construction of a *cabane* upon the southern side of the Matterhorn. The project was taken up with spirit, and funds for its execution were speedily provided - principally by the members of the Italian Alpine Club, or by their friends. The indefatigable Jean-Antoine found a natural hole upon the ledge called the

[1] The pace of a party is ruled by that of its least efficient member.

'cravate' (13,524), and this, in course of time, was turned, under his direction, into a respectable little hut. Its position is superb, and gives a view of the most magnificent character.

Whilst this work was being carried out, my friend Mr. F. Craufurd Grove consulted me respecting the ascent of the Matterhorn. I recommended him to ascend by the *northern* route, and to place himself in the hands of Jean-Antoine Carrel. Mr. Grove found, however, that Carrel distinctly preferred the southern side, and they ascended accordingly by the Breuil route. Mr. Grove has been good enough to supply the following account of his expedition. He carries on my description of the southern route from the highest point I attained on that side (a little below the 'cravate') to the summit, and thus renders complete my descriptions of the two sides.

"In August 1867 I ascended the Matterhorn from Breuil, taking as guides three mountaineers of the Valtournanche—J.-A. Carrel, J. Bich, and S. Meynet,—Carrel being the leader. At that time the Matterhorn had not been scaled since the famous expedition of the Italian guides mentioned above.

"Our route was identical with that which they followed in their descent when, as will be seen, they struck out on one part of the mountain a different line from that which they had taken in ascending. After gaining the Col du Lion, we climbed the south-western or Breuil *arête* by the route which has been described in these pages, passing the night at the then unfinished hut constructed by the Italian Alpine Club on the 'cravate.' Starting from the hut at daylight, we reached at an early hour the summit of the 'shoulder,' and then traversed its *arête* to the final peak of the Matterhorn. The passage of this *arête* was perhaps the most enjoyable part of the whole expedition. The ridge, worn by slow irregular decay into monstrous and rugged battlements, and guarded on each side by tremendous precipices, is grand beyond all description, but does not, strange to say, present any remarkable difficulty to the climber, save that it is exceedingly trying to the head. Great care is of course necessary, but the scramble is by no means of so arduous a nature as entirely to absorb the attention; so that a fine climb, and rock scenery, of grandeur perhaps unparalleled in the Alps, can both be appreciated.

"It was near the end of this *arête*, close to the place where it abuts against the final peak, that Professor Tyndall's party turned in 1862,[1] arrested by a cleft in the ridge. From the point where they stopped the main tower of the Matterhorn rises in front of the climber, abrupt, magnificent, and apparently inaccessible. The summit is fully 750 feet in vertical height above this spot, and certainly, to my eye, appeared to be separated from me by a yet more considerable interval; for I remember, when at the end of the *arête*, looking upward at the crest of the mountain, and thinking that it must be a good 1000 feet above me.

"When the Italian guides made their splendid ascent, they traversed the *arête* of the shoulder to the main peak, passed the

[1] See pp. 44-5.

cleft which has been mentioned (p. 44), clambered on to the tremendous north-western face of the mountain (described by Mr. Whymper at pp. 59 and 61), and then endeavoured to cross this face so as to get on to the Z'Mutt *arête*.[1] The passage of this slope proved a work of great difficulty and danger. I saw it from very near the place where they traversed, and was unable to conceive how any human creatures managed to crawl over rocks so steep and so treacherous. After they had got about half-way across, they found the difficulties of the route and the danger from falling stones so great, that they struck straight up the mountain, in the hope of finding some safer way. They were to a certain extent successful, for they came presently to a small ledge, caused by a sort of fault in the rock, running horizontally across the north-western face of the mountain a little distance below the summit. Traversing this ledge, the Italians found themselves close to the Z'Mutt *arête*, but still separated from it by a barrier, to outflank which it was necessary to descend a perpendicular gully. Carrel and Bich were lowered down this, the other two men remaining at the top to haul up their companions on their return, as otherwise they could not have got up again. Passing on to the Z'Mutt *arête* without further difficulty, Carrel and Bich climbed by that ridge to the summit of the mountain. In returning, the Italians kept to the ledge for the whole distance across the north-western face, and descended to the place where the *arête* of the shoulder abuts against the main peak by a sort of rough ridge of rocks between the north-western and southern faces. When I ascended in 1867, we followed this route in the ascent and in the descent. I thought the ledge difficult, in some places decidedly dangerous, and should not care to set foot on it again; but assuredly it neither is so difficult nor so continuously dangerous as those gaunt and pitiless rock-slopes which the Italians crossed in their upward route.

"The credit of making the *Italian* ascent of the Matterhorn belongs undoubtedly to J.-A. Carrel and to the other mountaineers who accompanied him. Bennen led his party bravely and skilfully to a point some 750 feet below the top. From this point, however, good guide though he was, Bennen had to retire defeated; and it was reserved for the better mountain-craft of the Valtournanche guide to win the difficult way to the summit of the Matterhorn."

Mr. Craufurd Grove was the first traveller who ascended the Matterhorn after the accident, and the natives of Val Tournanche were, of course, greatly delighted that his ascent was made upon their side. Some of them, however, were by no means well pleased that J.-A. Carrel was so much regarded. They feared, perhaps, that he would acquire the monopoly of the mountain. Just a month after Mr. Grove's ascent, six Valtournanchians set out to see whether they could not learn the route, and so come in for a share of the good things which were expected to arrive. They were three Maquignaz's, Cæsar Carrel (my old guide), J.-B. Carrel, and a daughter of the last

[1] A ridge descending towards the Z'Muttgletscher.

named! They left Breuil at 5 A.M. on Sept. 12, and at 3 P.M. arrived at the hut, where they passed the night. At 7 A.M. the next day they started again (leaving J.-B. Carrel behind), and proceeded along the 'shoulder' to the final peak; passed the cleft which had stopped Bennen, and clambered up the comparatively easy rocks on the other side until they arrived at the base of the last precipice, down which we had hurled stones on July 14, 1865. They (young woman and all) were then about 350 feet from the summit! Then, instead of turning to the left, as Carrel and Mr. Grove had done, J.-Joseph and J.-Pierre Maquignaz paid attention to the cliff in front of them, and managed to find a means of passing up, by clefts, ledges, and gullies, to the summit. This was a shorter (and, though difficult, is a much easier) route than that taken by Carrel and Grove, and it has generally been followed by those who have since then ascended the mountain from the side of Breuil.[2] Subsequently, ropes were fixed over the most difficult portions of the final climb.



J.-JOSEPH MAQUIGNAZ.[1]

In the meantime they had not been idle upon the other side. A hut was constructed upon the eastern face, at a height of 12,526 feet above the sea, near to the crest of the ridge which descends towards Zermatt (north-east ridge).[3] The erection was undertaken by the Knubels, of St. Nicholas, at the expense of Monsieur Alex. Seiler and of the Swiss Alpine Club. This hut upon the east face is placed in an insecure position, and is now seldom used, as another hut or *cabane* has been built upon the Hörnli ridge,[4] a few yards to the east of, and slightly lower down than the spot where Mr. Kennedy put up his cairn in 1862 (see p. 27).

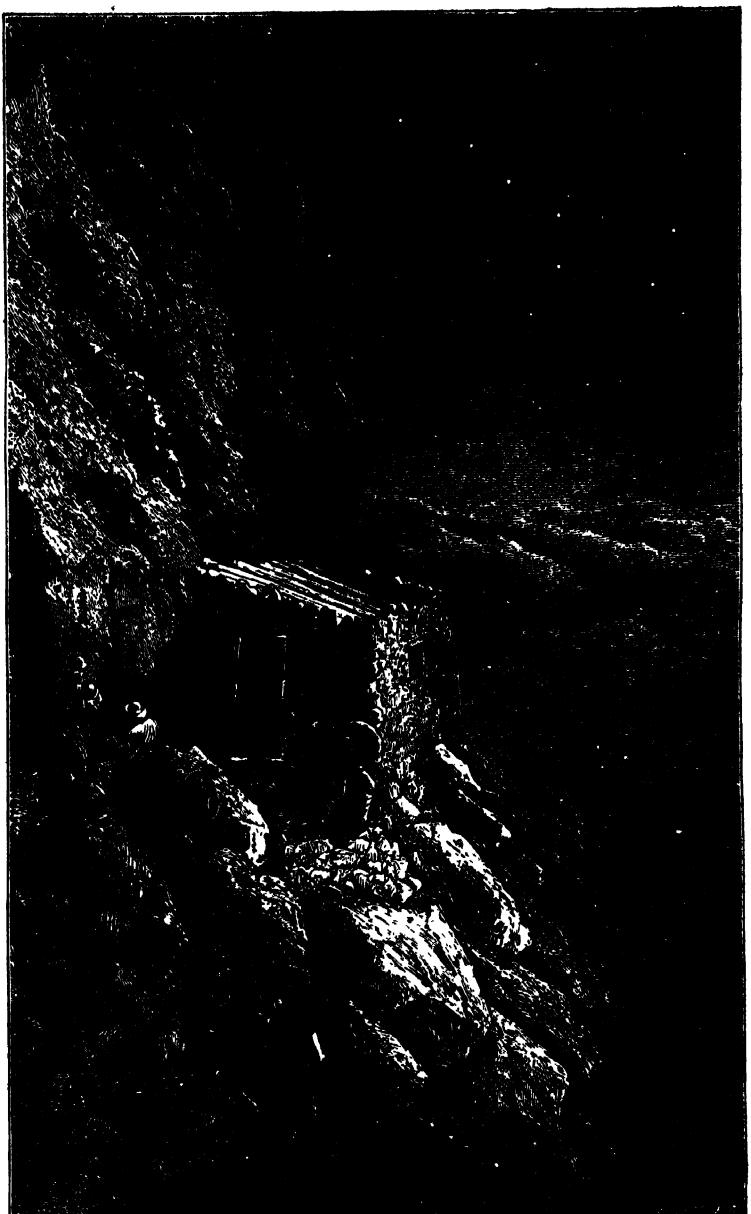
The second ascent of the Matterhorn on the northern side was

[1] By permission, from a photograph by Signor Sella.

[2] J.-Joseph and J.-Pierre Maquignaz alone ascended; the others had had enough and returned. It should be observed that ropes had been fixed, by J.-A. Carrel and others, over *all* the difficult parts of the mountain as high as the shoulder, *before* the ascent of these persons. This explains the facility with which they moved over ground which had been found very trying in earlier times. The young woman declared that the ascent (as far as she went) was a trifle, or used words to that effect; if she had tried to get to the same height before 1862, she would probably have been of a different opinion.

[3] This is marked on the Map of the Matterhorn and its Glaciers (*Cab. S.A.C.*).

[4] The position of the hut on the Hornli ridge is marked by the word *Cabane* on the Map of the Matterhorn and its Glaciers.



THE CABANE ON THE EAST FACE OF THE MATTERHORN.

made by Mr. J. M. Elliot, on July 24-25, 1868, with the guides Joseph Marie Lochmatter and Peter Knubel. Down to the end of 1871, the ascents that were made were equally divided between the northern (or Zermatt) and the southern (or Breuil) route. Until that time, neither guides nor tourists had got clear of the idea that the Swiss route was more difficult and dangerous than the Italian one. In



THE HUT ON THE HORNLI RIDGE.

1872 (the year following the publication of *Scrambles amongst the Alps*) the Zermatt side found more favour, and it has continued to be the popular route to the present time (1898). In Appendix E of the 4th Edition of *Scrambles* the ascents have been tabulated down to the first which was made in 1880;[1] and, amongst the 194 which are enumerated, 136 were made on the Swiss side, against 23 upon the Italian side. On nine other occasions persons crossed the mountain from Zermatt to Breuil, and upon twenty-two more traversed it from Breuil to Zermatt.

Prof. Tyndall was the first to turn the summit of the Matterhorn into a pass. He went up the Breuil side and came down upon Zermatt. A few days later Messrs. Hoiler and Thioly crossed the mountain in the reverse direction.

After these, the first ascent which calls for notice is that by Signor F. Giordano. This gentleman came to Breuil several times after his visit in 1865, but he was always baffled by the weather. In July 1866, he got as high as the 'cravate' with Jean-Antoine Carrel and other men, and was detained there *five days and nights unable to move either up or down!* At last, on Sept. 3-5, 1868, he was able to

[1] It has not been possible to carry this list on to a later date. Ascents have multiplied, and are often made by persons whose names are unknown.
The *Geneva Telegraph* of Sept. 24, 1892, stated that on the previous Sunday there were twenty-three tourists upon the summit, one of whom was a Royal Prince.

gratify his desire, and accomplished the feat of ascending the mountain upon one side and descending it upon the other. Signor Giordano spent a considerable time in examining the structure of the Matterhorn, and became benighted upon its eastern face in consequence. I am indebted to him for the valuable note and the accompanying section which are given in Appendix I.[1]

Questions having been frequently put to me respecting the immediate summit of the Matterhorn, I made an ascent of the mountain in 1874, to photograph the summit, and to see what changes had occurred since our visit nine years before. The summits of all high mountains vary from time to time, and the Matterhorn is no exception to the general rule. It was sharper and narrower in 1874 than in 1865. Instead of being able 'to run about,' every step had to be cut with the axe; and the immediate summit, instead of being a blunt and rounded eminence, was a little cone of snow which went to a sharp point. In consequence of a strong north wind which was blowing at the time, we had to work down upon the edge of the cliff overlooking Breuil, to get protection for the camera, and eventually we gained a position which gave a good view of the summit; but our ledge was so small that we could not venture to unrope, and Jean-Antoine had to squat down whilst I photographed over his head. The engraving upon p. 82 has been made from the photograph which was taken on this occasion. The nearest of the lower peaks, on the left, is the summit of the Dent d'Hérens.

Carrel and I stopped a second night at the *cabane* on the east face, and whilst there we had the insecurity of its position forcibly impressed upon us by seeing a huge block break away from the rock at its side, and go crashing down over the very route which is commonly pursued by tourists. The view from this hut extends from the Bietschhorn on the north to the Grand Tournalin in the south, and includes the Mischabel group, the Allalinhorn, Alphubel, Rimpfischhorn and Strahlhorn, Monte Rosa, the Lyskamm and the Breithorn. The uppermost 800 feet of the Matterhorn can be seen from the hut, but the rest of the intervening part of the mountain is not visible, being hidden by a small ridge which projects from the face.

In 1879 two deaths occurred upon the Matterhorn, within a few hours of each other,—one in the hut on the 'cravate,' and the second upon the eastern face. On August 12, Dr. C. Lüscher and Prof. H. Schiess started from Breuil at a very early hour, accompanied by the guides Joseph Marie Lochmatter, Joseph Brantschen, and P. Beytrison. They gained the hut on the 'cravate' (13,524 feet) at 1.20 P.M., and stopped there for the night; and on the following day the party crossed the summit of the mountain, with the exception of Brantschen, who was left behind in the hut, some say only slightly ill, and others at

[1] Signor Giordano carried a mercurial barometer throughout the entire distance, and read it frequently. His observations enable me to determine the heights that were attained upon the different attempts which were made to ascend the mountain, and the various points upon it which have been so frequently mentioned. He left a minimum thermometer upon the summit in 1868. This was recovered by J.-A. Carrel in July 1869, and was found to register only 9° Fahrenheit below the freezing-point. It was supposed that it was protected from the winter cold by a deep covering of snow. The explanation is scarcely satisfactory.



THE SUMMIT OF THE MATTERHORN IN 1874.

the point of death. They sent back assistance to their sick comrade in a somewhat tardy fashion, and when the relief party arrived at the hut Brantschen was found dead. Dr. Lüscher and Prof. Schiess furnished an account of what happened to the Basel Section of the Swiss Alpine Club, and from this statement the following extracts are made.

"When we reached the 'cravate' it was already 1 P.M. Lochmatter told us we had still four hours' work to reach the top, and the question arose whether it would not be more prudent to spend the night in the Italian cabane. . . In the course of the afternoon we remarked that Brantschen was unwell; Lochmatter kept on pressing him to eat and drink. We took no great heed of the matter, and looked on it as mountain-sickness, or the result of drinking too much water during the ascent. On my asking Brantschen when he had first felt unwell, he answered, since he had slept in the sun. We observed no spitting of blood on his part during the ascent; had we noticed anything of the kind we should naturally not have taken him with us. Up to 5 P.M. he was sitting on the door-step, his gaze directed on Breuil. Later on, after he had lain down, he began to groan and throw himself about, in the night also to rattle in the throat. Being asked where he felt pain, he answered, he felt pains all over. There was altogether not much to be got out of him either by us or by Lochmatter. He was, however, in no high state of fever, he was not hot to the touch, and his pulse was not unusually rapid. There was no remarkable coughing. My guide acted as cook, and succeeded with the small stock of wood in making tea several times, and towards morning chocolate also. This tea was the only restorative we could offer to the sick man, and he seemed to take it gladly. Towards morning he at last became quieter, his breathing more regular, and he left off groaning and crying out."

"On the morning of August 13 the guides had given a hope that Brantschen might recover sufficiently to accompany us; for this reason the start was delayed to 6 o'clock. But it became evident that this was impossible. And now no discussion took place, neither was there any interchange of plans between the guides and Brantschen. It appeared best to all of us to wrap up Brantschen well, to furnish him with the necessary provisions, and to hurry over quickly to Zermatt and send him help. Had we remained with him it would have been no benefit to Brantschen; and I am also convinced that he himself thought our course of action perfectly natural, otherwise he would have made some remonstrance, which he did not do. We bade him keep up his courage and wished him farewell, in the hope that he would by degrees entirely recover. . . At 1.30 A.M. on August 14 we reached Zermatt. We had sent from the Swiss hut a message before us, and at 3 o'clock the relief party started over the Furgg-gletscher skirting the Matterhorn. It found Brantschen already dead and stiff; apparently a rupture of the heart or lungs had happened."[1]

[1] The above extracts are taken from the *Alpine Journal*, vol. ix, pp. 374-77. I entirely concur in the following remarks, which were appended by the Editor. "On the facts

At the time that this was taking place on the South side of the Matterhorn, Dr. William O. Moseley of Boston lost his life on the East Face. He left Zermatt at 10.30 P.M. on August 13, in company with Mr. A. E. Craven and the guides Peter Rubi and Christian Inabnit; and ascended the mountain by the usual northern route, without stopping at the hut. They reached the summit at 9 A.M. on the 14th, and had returned to within a short distance from the hut, when Dr. Moseley (who had found it irksome to be tied up, and had frequently wished to go unroped) untied himself from the rest, doing so entirely upon his own responsibility. A few minutes later the party had to cross a projecting piece of rock. Rubi went over first, and planted his axe in position to give firm footing to Dr. Moseley, who followed. But, unhappily, he declined assistance; placed his hand upon the rock, and endeavoured to vault over it. In doing so he slipped, lost hold of his axe, and fell with ever-accelerating velocity down the East Face for about 2000 feet, and of course was killed on the spot. His body was recovered three days later and was interred under the south wall of the English Church at Zermatt. "*I was shocked to find*," said a friend who examined his remains, "*that Dr. Moseley had hardly any nails in one of his boots.*"

Many persons have talked at different times about the possibility of finding a way up the Matterhorn from the side of the Z'Mutt Glacier; but it was not until the year 1879 that a way was discovered. On September 2-3, Mr. A. F. Mummery with the guides Alexander Burgener, Petrus, and Gentinetta succeeded in gaining the summit by first going up the long snow-buttress which runs out from the mountain towards the north-west, and then up the rocks above. When nearing the top, they joined the routes taken by Carrel and Mr. Grove upon the first ascents which were made on the Italian side.[1]

At the very time that Mr. Mummery was engaged in his expedition, Mr. W. Penhall, with the guides Ferdinand Imseng and Louis Zurbrucken, was occupied on a similar enterprise, and also ascended the Matterhorn from the direction of the Stockji. Mr. Penhall, however, at first took a course slightly more to the south than Mr. Mummery, though he, at last, like the others, got on to the main Z'Mutt *arête*, and completed the ascent by following a portion of the old Italian route.[2]

of this account, but one judgment can be formed. In the face of the description given by Prof. Schiess of Brantschen's condition during the night, his excuses are altogether inadequate. The adoption of a route by which the nearest succour was (at the pace of the party) 19½ instead of 8 hours off, may have been simply a deplorable error of judgment; but the determination to leave the sick man alone showed unpardonable want of heart. It must ever be a matter of profound regret that any travellers or guides should, without the least pressure of necessity, have left a sick man, without firewood in a hut 13,000 feet above the sea, to over thirty hours of certain and absolute solitude. There can be no doubt that the desertion of Brantschen under such circumstances was a flagrant breach of the first tradition of all honourable mountaineering—the tradition, by virtue of which every member of a party, guide or mountaineer, has been accustomed in danger or distress to count on the support of his comrades."

[1] Mr. Mummery's description will be found in the *Alpine Journal*, vol. ix, pp. 458-62.

[2] See *Alpine Journal*, vol. ix, pp. 449-58.

Three days afterwards (Sept. 5-6), Mr. J. Baumann followed in Mr. Mummery's footsteps. "I found it," he said, "an interesting rock-climb, presenting no extraordinary difficulties. . . I am of opinion that this ascent by the Z'Mutt *arête* will in future become the favourite way of crossing the Matterhorn."[1] As yet, Mr. Baumann's anticipation has not been realised. Indeed, until 1894, I did not hear that *anyone* further had either ascended or descended by the routes of Messrs. Mummery and Penhall.[2]

On July 19, 1880, Mr. A. Mummery invented another way up the Matterhorn. With the guides Alexander Burgener and B. Venetz, he ascended *viâ* the Furgg Glacier and the East Face, keeping near the south-east ridge until reaching the level of the northern 'shoulder,' and then crossing the face to the 'shoulder.' Then the ascent was completed by the Zermatt route. See *Alpine Journal*, vol. x, p. 96, and *My Climbs in the Alps and Caucasus*, chapter ii.

In 1886, another life was lost on the East Face. Two friends, named Borckhardt and Davies, resolved to climb the mountain. We knew, said the latter, that it had been done by ladies and youths. "It was the regular thing to go up the Matterhorn, and we accordingly determined to make the ascent."

Accompanied by Fridolin Kronig and Peter Aufdenblatten, they left Zermatt on Aug. 16, in fine weather; and at 3 A.M. on the 17th started from the hut on the Hörnli ridge, arriving on the summit at about 9 A.M. The comparative rapidity with which they *mounted* was possibly due to the fact that they were closely following in the track of other parties of tourists. The weather changed during the early morning, and it began to hail while they were still on the top. They commenced to descend at 9.20 A.M., in the next *ten hours* came down scarcely 2000 feet, and were benighted some distance above the old hut on the East Face. All tracks on the mountain were obliterated by the hail and snow which fell. They remained on this spot from about 7 P.M. on the 17th of August until 1 P.M. on the 18th, and then Mr. Davies and the two guides continued the descent, leaving Mr. Borckhardt behind, upon the open face of the mountain, lying in a helpless condition, at the point of death! A few hours later he was found dead and stiff, partly covered by freshly-fallen snow.

The entire story exceeds in horror and incredibility the abandon-

[1] *Alpine Journal*, vol. ix, p. 306.

[2] The following paragraph is taken from the *Alpine Journal*, vol. xiii, pp. 399-400. On Aug. 3, 1887, Messrs. G. Lammer and A. Lorria "without guides, left the Stockje hut at 1.45 A.M. to attempt the ascent of the Matterhorn by Mr. Penhall's route. They reached a point not very far from the top, but were compelled at 1 P.M. to turn back, owing to iced rocks. At 5.30 or 6 P.M., while traversing Penhall's couloir, they were carried down by an avalanche. Herr Lorria received concussion of the brain, besides a fracture of the right leg above the ankle, had both feet frost-bitten, and became unconscious. Herr Lammer, with a badly-sprained ankle, pulled his friend on to a rock, stripped off his own coat to cover him, and then went for aid. He found no one at the Stockje hut, so had to crawl down to the Staffel Alp, whence he despatched a message to Zermatt. A relief party came up and reached Herr Lorria about 7.30 A.M. on Aug. 4. He was still unconscious, and in his delirium had stripped off his clothes." Further details of this mad adventure will be found in the *Alpine Journal*, vol. xiii, pp. 550-53. I am, however, told by a member of the relief party that Lorria was *not* unconscious when he was rescued.

ment of Brantschen, and is much too long to recount in these pages.[1] An inquiry into this miserable business was held by the Valaisan authorities, and in an official Report upon it by Prof. F. O. Wolf, which was published at Sion, it is said "that the sole causes of the accident were the sudden changes in the weather; the insufficient number of guides; and the facts that neither Mr. Davies nor Mr. Borckhardt were fit to climb such a peak, were insufficiently clad, and badly provisioned." A further cause might have been added, namely, the incapacity of the guides.

In 1890, there was yet another accident upon the East Face, which caused the loss of an entire party. A young man from Strasburg, Herr Goehrs, started from the hut on the Hörnli ridge at 3.30 A.M. on the 13th of September with two young guides, Alois Graven and Joseph Brantschen. They were shortly followed by several other persons. About 9 A.M., both parties encountered high wind when a thousand feet or so below the summit, and decided to return. Very soon afterwards, Fridolin Burgener (one of the guides of the lower party) heard a clatter, and saw Herr Goehrs and his guides flying through the air within a hundred yards of him. The three fell until they were brought up on the Furgg-gletscher, and of course were killed outright. Though the cause of this accident is unknown, the probability is that these three very young men (who could not have had adequate mountaineering experience) were killed through one or more of them slipping upon the easiest side of the mountain. Since this last lamentable affair the Zermatt face of the Matterhorn has been free from disaster, but there still remain to be mentioned two catastrophes which have occurred upon the Italian side.

When telegrams came in, at the beginning of September, 1890, stating that Jean-Antoine Carrel had died from fatigue on the south side of the Matterhorn, those who knew the man scarcely credited the report. It was not likely that this tough and hardy mountaineer would die from fatigue anywhere, still less that he would succumb upon 'his own mountain.' But it was true. Jean-Antoine perished from the combined effects of cold, hunger, and fatigue upon his own side of his own mountain, almost within sight of his own home. He started on the 23rd of August from Breuil, with an Italian gentleman and Charles Gorret (brother of the Abbé Gorret), with the intention of crossing the Matterhorn in one day. The weather at the time of their departure was the very best, and it changed in the course of the day to the very worst. They were shut up in the *cabane* at the foot of the Great Tower during the 24th, with scarcely any food, and on the 25th retreated to Breuil. Although Jean-Antoine (upon whom, as leading guide, the chief labour and responsibility naturally devolved) ultimately succeeded in getting his party safely off the mountain, he himself was so overcome by fatigue, cold, and want of food that he died on the spot.

Jean-Antoine Carrel entered his sixty-second year in January, 1890,[2]

[1] See the *Alpine Journal*, vol. xiii, pp. 95-110, and 166-171.

[2] The exact date of his birth does not seem to be known. He was christened at the Church of St. Antoine, Valtournanche, on January 17, 1829.

and was in the field throughout the summer. On 21st August, having just returned from an ascent of Mont Blanc, he was engaged at Courmayeur by Signor Leone Sinigaglia, of Turin, for an ascent of the Matterhorn. He proceeded to the Val Tournanche, and on the 23rd set out with him and Charles Gorret, for the last time, to ascend his own mountain by his own route. A long and clear account of what happened was communicated by Signor Sinigaglia to the Italian Alpine Club, and from this the following relation is condensed:—

"We started for the Cervin at 2.15 A.M. on the 23rd, in splendid weather, with the intention of descending the same night to the hut at the Hörnli on the Swiss side. We proceeded pretty well, but the glaze of ice on the rocks near the Col du Lion retarded our march somewhat, and when we arrived at the hut at the foot of the Great Tower, prudence counselled the postponement of the ascent until the next day, for the sky was becoming overcast. We decided upon this, and stopped.

"Here I ought to mention that both I and Gorret noticed with uneasiness that Carrel showed signs of fatigue upon leaving the Col du Lion. I attributed this to temporary weakness. As soon as we reached the hut he lay down and slept profoundly for two hours, and awoke much restored. In the meantime the weather was rapidly changing. Storm clouds coming from the direction of Mont Blanc hung over the Dent d'Hérens, but we regarded them as transitory, and trusted to the north wind, which was still continuing to blow. Meanwhile, three of the Maquignaz's and Edward Bich, whom we found at the hut, returning from looking after the ropes, started downwards for Breuil, at parting wishing us a happy ascent, and holding out hopes of a splendid day for the morrow.

"But, after their departure, the weather grew worse very rapidly; the wind changed, and towards evening there broke upon us a most violent hurricane of hail and snow, accompanied by frequent flashes of lightning. The air was so charged with electricity that for two consecutive hours in the night one could see in the hut as in broad daylight. The storm continued to rage all night, and the day and night following, continuously, with incredible violence. The temperature in the hut fell to – 3 degrees.

"The situation was becoming somewhat alarming, for the provisions were getting low, and we had already begun to use the seats of the hut as firewood. The rocks were in an extremely bad state, and we were afraid that if we stopped longer, and the storm continued, we should be blocked up in the hut for several days. This being the state of affairs, it was decided among the guides that if the wind should abate we should descend on the following morning; and, as the wind did abate somewhat, on the morning of the 25th (the weather, however, still remaining very bad), it was unanimously settled to make a retreat."

"At 9 A.M. we left the hut. I will not speak of the difficulties and dangers in descending the *arête* to the Col du Lion, which we reached at 2.30 P.M. The ropes were half frozen; the rocks were covered with a glaze of ice, and fresh snow hid all points of support.



Carrel Jean Antoine

Some spots were really as bad as could be, and I owe much to the prudence and coolness of the two guides that we got over them without mishap."

"At the Col du Lion, where we hoped the wind would moderate, a dreadful hurricane recommenced, and in crossing the snowy passages we were nearly *suffocated* by the wind and snow which attacked us on all sides.[1] Through the loss of a glove, Gorret, half an hour after leaving the hut, had already got a hand frost-bitten. The cold was terrible here. Every moment we had to remove the ice from our eyes, and it was with the utmost difficulty that we could speak so as to understand one another."

"Nevertheless, Carrel continued to direct the descent in a most admirable manner, with a coolness, ability, and energy above all praise. I was delighted to see the change, and Gorret assisted him splendidly. This part of the descent presented unexpected difficulties, and at several points great dangers, the more so because the *tourmente* prevented Carrel from being sure of the right direction, in spite of his consummate knowledge of the Matterhorn. At 11 P.M. (or thereabouts - it was impossible to look at our watches, as all our clothes were half frozen) we were still toiling down the rocks. The guides sometimes asked each other where they were; then we went forward again to stop, indeed would have been impossible. Carrel at last, by marvellous instinct, discovered the passage up which we had come, and in a sort of grotto we stopped a minute to take some brandy."

"While crossing some snow we saw Carrel slacken his pace, and then fall two or three times to the ground. Gorret asked him what was the matter, and he said 'nothing,' but he went on with difficulty. Attributing this to fatigue through the excessive toil, Gorret put himself at the head of the caravan, and Carrel, after the change, seemed better, and walked well, though with more circumspection than usual. From this place a short and steep passage takes one down to the pastures, where there is safety. Gorret descended first, and I after him. We were nearly at the bottom when I felt the rope pulled. We stopped, awkwardly placed as we were, and cried out to Carrel several times to come down, but we received no answer. Alarmed, we went up a little way, and heard him say, in a faint voice, 'Come up and fetch me. I have no strength left.'"

"We went up and found that he was lying with his stomach to the ground, holding on to a rock, in a semi-conscious state, and unable to get up or to move a step. With extreme difficulty we carried him up to a safe place and asked him what was the matter. His only answer was, 'I know no longer where I am.' His hands were getting colder and colder, his speech weaker and more broken, and his body more still. We did all we could for him, putting with great difficulty the rest of the cognac into his mouth. He said something, and appeared to revive, but this did not last long. We tried rubbing him with snow, and shaking him, and calling to him continually; but he could only answer with moans.

[1] Signor Peraldo, the innkeeper at Breuil, stated that a relief party was in readiness during the whole of August 25 (the day on which the descent was made), and was prevented from starting by the violence of the tempest.

"We tried to lift him, but it was impossible—he was getting stiff. We stooped down, and asked in his ear if he wished to commend his soul to God. With a last effort he answered 'Yes,' and then fell on his back, dead, upon the snow."

Such was the end of Jean-Antoine Carrel,—a man who was possessed with a pure and genuine love of mountains; a man of originality and resource, courage and determination, who delighted in exploration. His special qualities marked him out as a fit person to take part in new enterprizes, and I preferred him to all others as a companion and assistant upon my journey amongst the Great Andes of the Equator. Going to a new country, on a new continent, he encountered much that was strange and unforeseen; yet when he turned his face homewards he had the satisfaction of knowing that he left no failures behind him.[1] After parting at Guayaquil in 1880, we did not meet again. In his latter years, I am told, he shewed signs of age, and from information which has been communicated to me it is clear that he had arrived at a time when it would have been prudent to retire—if he could have done so. It was not in his nature to spare himself, and he worked to the very last. The manner of his death strikes a chord in hearts he never knew. He recognized to the fullest extent the duties of his position, and in the closing act of his life set a brilliant example of fidelity and devotion. For it cannot be doubted that, enfeebled as he was, he could have saved himself had he given his attention to self-preservation. He took a nobler course; and, accepting his responsibility, devoted his whole soul to the welfare of his comrades, until, utterly exhausted, he fell staggering on the snow. He was already dying. Life was flickering, yet the brave spirit said 'It is *nothing*.' They placed him in the rear to ease his work. He was no longer able even to support himself; he dropped to the ground, and in a few minutes expired.[2]



CARREL'S CROSS.

[1] See *Travels amongst the Great Andes of the Equator*, 1892.

[2] Signor Sinigaglia wrote in a letter to a friend, from which I am permitted to quote, "I don't try to tell you of my intense pain for Carrel's death. He fell after having saved me, and no guide could have done more than he did." Charles Gorret, through his brother the Abbé, wrote to me that he entirely endorsed what had been said by Sig. Sinigaglia, and added, "We would have given our own lives to have saved his."

Jean-Antoine died at the foot of the 'little staircase.' On the 26th of August his body was brought to Breuil, and upon the 29th it was interred at Valtournanche. At

I very much regret to have to mention yet another tragedy, which occurred more recently. On August 7, 1893, Andreas Seiler (one of the youngest members of the family of my old friend M. Alexandre Seiler) and Johann Biener of Zermatt lost their lives on the south side of the Matterhorn. Mr. Oscar Gysi, who was closely following them, has, at my request, furnished the following statement:—

"On August 7, shortly before 6 A.M., we left the Lac Noir Hotel, crossed the Furgg Joch, and on the Italian side joined the ordinary route from Breuil for the Matterhorn. There were five of us—Andreas Seiler, myself, and as guides Johann Biener (aged 24), Joseph Taugwalder (aged 27), and L. Moser of Taesch (aged 22). When about an hour below the Col du Lion we tied up,—Seiler insisting upon being roped to Biener, with whom he had been climbing all the summer. Biener and Seiler were in advance, but we kept well together. When we were considerably higher than the Tête du Lion, and within about thirty minutes of the hut at the foot of the Great Tower, we came to an almost perpendicular chimney, some twenty feet high, down which a stout knotted rope hung. Biener and Seiler passed up it. We followed, and on arriving at the top Moser took off his *sac* to tie up afresh the wood that he carried. Seiler and Biener were impatient to reach the hut, and wished to proceed without us; but Taugwalder and Moser asked them to wait. Their words were, however, useless. Moser, who had warned Seiler repeatedly during the last half-hour to be careful, and who did not like their over-confidence, prayed Seiler to let him tie himself to their rope. Seiler and Biener, however, only laughed at him for his concern, and started off. Moser finished tying up his wood, and we went on. The others were only five minutes ahead, and we had reached a difficult spot, and were standing in steps cut at the top of a small patch of ice, at an angle of 50°, and close to rocks, when Moser called out, 'Beware of stones.' We pressed up close to the rock and listened, when the two" (Seiler and Biener) "shot past us." They fell on to the Glacier du Lion, and when the bodies were recovered they were still tied together.

On July 27, 1900, two guides of Zermatt (Alphons Furrer and Auguste Gentinetta) were descending the East Face of the Matterhorn with a young Englishman named Sloggett. Shortly before reaching the Hörnli ridge, they were assailed by falling stones. The upper part of Furrer's head was carried away, and he died on the spot. Mr. Sloggett was struck in the mouth, and had his lower jaw damaged and several teeth knocked out; and Gentinetta was seriously bruised in the legs.

On July 23, 1901, a party of three Englishmen and two ladies went from the Hotel at Breuil to the *cabane* at the foot of the Great Tower on the Matterhorn, escorted by one guide and a porter. While descending, one of the ladies slipped and fell when a little below the Col du Lion, and dragged down three others with her. Two out of the four were killed on the spot. The guide and the second lady were injured, though not fatally. See the *Times Weekly Edition*, Aug. 2, 1901.

the beginning of July, 1893, an iron cross was placed on the spot where he expired, at the expense of Sig. Sinigaglia, who went in person along with Charles Gorret to superintend its erection.

CHAPTER VI.

HOW TO GET TO ZERMATT.

ROUTE TO TAKE—TIMES, DISTANCES AND FARES—PONTARLIER—AT VALLORBES EVERYONE DESCENDS—LAUSANNE AND OUCHY—GIBBON AT LAUSANNE *THE* LAKE ST. MAURICE THE RHONE VALLEY—MARTIGNY—SION SIERRE—SOUSTE—VISP OR VIÈGE—ALL CHANGE HERE.

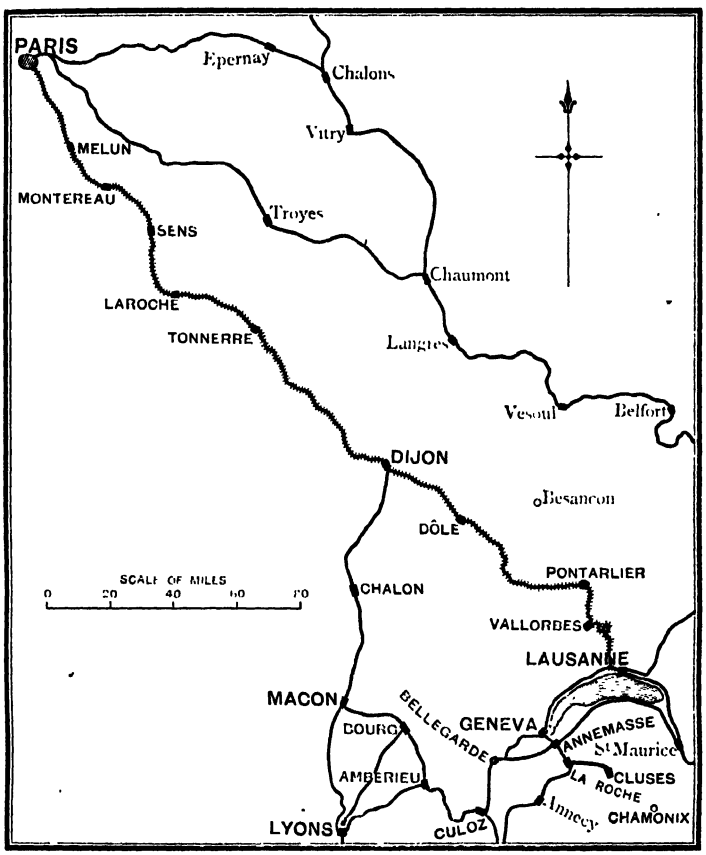
THE most direct way to Zermatt either from London or Paris is by the Paris, Lyons and Mediterranean Railway, *viâ* Dijon, Pontarlier, Vallorbes and Lausanne. The best train for those who wish to travel straight through is the Night Express, which leaves the Gare de Lyon at or about 8.50 p.m.[1] If this is taken, you should be landed at Zermatt in the following afternoon, in time to settle down before dinner. This train is supposed to arrive at Lausanne at 8.43 a.m. (central Europe time). As the corresponding train on the railway from Lausanne to Visp is fixed to leave at 9.15 a.m., there is apparently time to get something in the way of breakfast at Lausanne Buffet. It will be well to reckon that there will *not* be time.

The Night Express train is first and second class to Pontarlier, but after that it takes third class. It stops frequently between Paris—Lausanne (330 miles, 526 kils.), but does not remain anywhere long enough for a meal! Pay attention to the stomach before leaving Paris. The train in correspondence from Lausanne to Visp is a civilized one, with dining-cars (which were started in 1895). *It is better to take advantage of these cars than to attempt a meal at Lausanne.*

Try to sleep as far as Dôle. At Pontarlier look out for coffee. The high road which will be seen here near the line is memorable as that which was traversed by the retreating, demoralized Bourbaki Army, during the Franco-German war. At **Vallorbes** (2520 feet, 768 mètres;

[1] It is impossible to obtain information about the summer service in time for insertion here.

pop. 2147) there is the Swiss Custom-house. Everyone gets down. [This place is three miles from the eastern end of the Lac de Joux, a charming sheet of water 5½ miles long, in the heart of the Jura, not much known to English.] In the next 25 miles the line descends



PARIS TO PONTARLIER, VALLORBES AND LAUSANNE.

1160 feet, with many windings, upon the Lake of Geneva, and passes a constant succession of beautiful views on each side. Six kils. before arriving at Lausanne it joins the railway coming from Geneva.

Lausanne Station (1476 feet, 450 mètres) is situated between the town of Lausanne and Ouchy, its port on the Lake of Geneva. *Change here for Zermatt.* HOTEL TERMINUS ET BUFFET DE LA GARE (at the Station), 50 beds. **Lausanne.—Hotels**—THE GRAND HOTEL, beautifully situated, near the Station; HOTEL-PENSION BEAU-SÉJOUR

Dist.	Stations.		Times.	1st Cl.	2nd Cl.	3rd Cl.
kils.	**Paris**	dep.	8.50 p.m.	fr. c.	fr. c.	fr. c.
155	,, to Laroche (B) .	arr.	11.14 ,,	17 35	11 60	7 65
315	,, **Dijon** (B) .	do.	1.33 a.m.	35 30	23 80	15 50
		dep.	1.50 ,,	Fares	from	Dijon
347	,, Auxonne .	arr.	...	3 60	2 40	1 60
362	,, Dole (B) .	do.	2.37 ,,	5 25	3 55	2 30
387	,, Arc-Senans .	do.	3.14 ,,	8 05	5 45	3 55
394	,, Mouchard (B)	do.	3.24 ,,	8 85	5 95	3 90
		dep.	3.36 ,,			
430	,, Boujeailles .	arr.	4.55 ,,	12 90	8 70	5 65
455	,, Pontarlier (B)	do.	5.24 ,,	15 70	10 60	6 90
		dep.	5.45 ,,	Fares	from	Pontarlier
472	,, Hopitaux-Jougne	arr.	6.17 ,,	1 90	1 30	0 85
481	,, **Vallorbes** .	do.	6.33 [1] ,,	2 95	2 00	1 30
		dep.	7.40 [2] ,,	Fares	from	Vallorb
	,, La Sarraz .	arr.	...	.	...	...
	,, Cossonay .	do.	8.23 ,,	.	...	. .
526	,, **Lausanne** (B)	do.	8.43 ,,	4 80	3 35	2 40
		dep.	9.15 ,,	Fares	from	Lausanne
545	,, Vevey . .	arr.	9.10 ,,	2 00	1 40	1 00
549	,, Clarens . .	do.	9.47 ,,	2 50	1 75	1 25
551	,, Montreux .	do.	9.53 ,,	2 60	1 85	1 30
552	,, Territet-Glion	do.	9.57 ,,	2 80	2 00	1 40
553	,, Veytaux-Chillon	do.	...	2 95	2 05	1 45
556	,, Villeneuve .	do.	10.3 ,,	3 15	2 20	1 60
566	,, Aigle . .	do.	10.17 ,,	4 20	2 95	2 10
574	,, Bex . .	do.	10.30 ,,	5 00	3 50	2 50
578	,, **St. Maurice** (B)	do.	10.37 ,,	5 40	3 80	2 70
		dep.	10.47 ,,	Fares	from	St. Maurice
584	,, Evionnaz .	arr.	...	0 75	0 55	0 40
588	,, Vernayaz-Salvan	do.	11.2 ,,	1 05	0 75	0 55
593	,, Martigny .	do.	11.11 ,,	1 60	1 10	0 80
597	,, Charrat-Fully	do.	...	2 10	1 50	1 05
602	,, Saxon . .	do.	11.23 ,,	2 50	1 75	1 25
606	,, Riddes . .	do.	..	3 05	2 15	1 50
612	,, Ardon . .	do.	.	3 55	2 50	1 80
619	,, **Sion** (B) .	do.	11.43 ,,	4 30	3 00	2 15
		dep.	11.48 ,,			
624	,, St. Léonard .	arr.	..	4 90	3 45	2 45
628	,, Granges .	do.	.	5 20	3 65	2 60
634	,, Sierre (Siders)	do.	12.8 p.m.	5 95	4 20	3 00
639	,, Salquenen .	do.	..	6 35	4 45	3 20
644	,, Louèche (Souste)	do.	12.27 ,,	6 90	4 85	3 45
648	,, Tourtemagne	do.	...	7 40	5 20	3 70
652	,, Gampel .	do.	...	7 80	5 50	3 90
656	,, Rarogne .	do.	..	8 25	5 80	4 10
663	,, **Viège** (Visp) (B)	do.	12.50 ,,	8 95	6 30	4 50
		dep.	1.3 ,,	Fares	from	Visp
699	,, **Zermatt** .	arr.	3.18 ,,	...	16 00	10 00

N.B.—The times may be altered. Make enquiry.

(B) signifies Buffet. [1] Paris time. [2] Central Europe time.

(near the Station), 100 beds; HOTEL NATIONAL ET PENSION GALLO (near the Station), 30 beds; HOTEL ET PENSION STE. LUCE (near the Station), 25 beds; HOTEL GIBBON (central), 100 beds; HOTEL DU GRAND-PONT (central), 75 beds; HOTEL DES MESSAGERIES (central), 50 beds; HOTEL DU FAUCON, 60 beds; HOTEL DU NORD, 40 beds; HOTEL ET PENSION BELLEVUE, 30 beds; HOTEL ET PENSION VICTORIA, 50 beds; PENSION CAMPART (on the road from Lausanne to Ouchy), 50 beds; PENSION GRANCY-VILLA, 45 beds; HOTEL CONTINENTAL (just outside Railway Station).

Ouchy (1247 feet, 380 mètres).—HOTEL BEAU-RIVAGE, 200 beds; and HOTEL DU CHÂTEAU (picturesque building, close to the Lake), 80 beds. These two hotels, though separate buildings, are under the same management. HOTEL D'ANGLETERRE (close to the Lake), 40 beds; HOTEL DU PORT (small).

Lausanne is situated upon slopes facing the south, commanding admirable views of the Lake and of the mountains at its eastern end, and has long been a favourite place with English. The upper part of the town is several hundred feet above the railway station. Population is 46,732, and is said to be increasing at the rate of 2000 annually. Those who have time to spare will do well to stop a while either at Ouchy or Lausanne, as, in addition to their own attractions, they are excellent centres for excursions. Steamers from Ouchy convey one to any part of the Lake. Besides the line to Vallorbes and Pontarlier by which we came, and the other around the eastern end of the Lake and up the Rhone Valley (by which we shall depart), there are railways to Geneva (one hour, by express) and to Bern *viâ* Fribourg (98 kils. in 2 hours). On the former line there are many beautiful views of the Lake, and the latter passes through very picturesque country. Ouchy is connected by a rope tramway with Lausanne Railway Station and Lausanne. Trams run each way about every 15 min. Fares 40 and 20 centimes. It takes 20 min. to *walk* to Ouchy from Lausanne Station.

Although there has been a good deal of rebuilding at Lausanne, a considerable number of ancient houses remain clustered around the Cathedral, which is situated in the higher part of the town. Admittance to it can be obtained from 9 to 12, and from 1 to 4 free. At other times 50 centimes are charged. The tower can be ascended, and there is a superb view from it. The magnificent Post Office alongside the Hotel Gibbon was erected in 1899. An old staircase called *Escaliers du Marché* leads down from the Cathedral to the market-place, which is worth seeing at busy times. The *Musée Cantonal* (zoological and archæological) is close to the Cathedral. From the terrace in front of the *Tribunal Fédéral* there is a very fine view of the Lake and of the Alps on its farther side. The town of Evian-les-Bains lies almost immediately opposite. The most prominent mountain beyond the head of the Lake (a little to the right) is the Dent du Midi (10,777 feet, 3285 mètres). There are sometimes cheap excursions from Lausanne to Zermatt, at inclusive fares for rail and hotel. Enquire.

Gibbon the Historian had much to do with Lausanne and in making it known to his countrymen. He knew it in his youth, and lived there in his maturity. "You have often read," he said, "and heard the descriptions of this delightful Country, the banks of the lake of Geneva, and indeed it surpasses all description. A stranger is struck with surprise and admiration." After settling down there with the purpose of completing his "*Decline and Fall*," he wrote to Lord Sheffield in 1784

"This place has in every respect exceeded my best and most sanguine hopes. How often have you said, as often as I expressed any ill-humour against the hurry, the expence, and the precarious condition of my London life, 'Ay, that is a nonsensical scheme of retiring to Lausanne that you have got into your head,—a pretty fancy; you remember how much you liked it in your youth, but you have now seen more of the World, and if you were to try it again, you would find yourself most woefully disappointed.' I had it in my head, in my heart; I have tryed it; I have not been disappointed."

And a little later, in a letter to his stepmother, he wrote

"I have enjoyed a winter of the most perfect health that I have perhaps ever known, without any mixture of the little flying incommodities which in my best days have sometimes disturbed the tranquillity of my English life. . . I command a boundless prospect of vale, mountain, and water. . . A Terrace, one hundred yards long, extends beyond the front of the House, and leads to a close impenetrable shrubbery; and from thence the circuit of a long and various walk, carries me round a meadow and a vineyard. . . Few persons, either princes or philosophers, enjoy a more desirable residence."[1] *Private Letters of Edward Gibbon*, 3 vols. 8vo, London, 1897; vol. ii. pp. 89, 103-4.

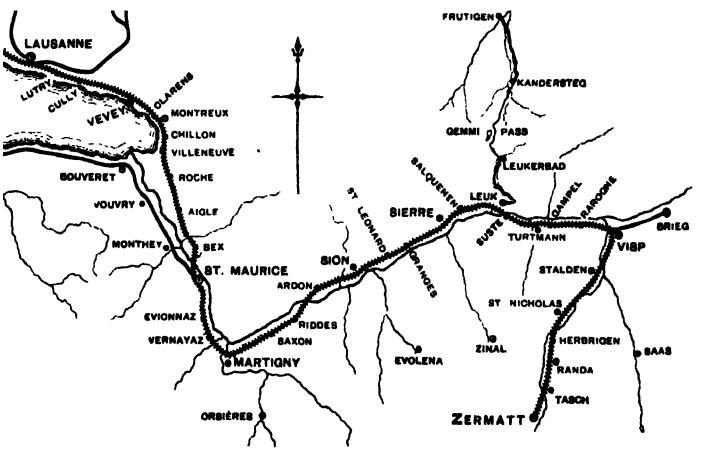
On resuming the journey by the railway to Visp (Viège), *secure a seat on the side of the Lake*. Points of view are very numerous, and we should not get to Zermatt this season if we stopped to look at half of them. The attractions of this corner of the Lake have caused the establishment of a multitude of Hotels and Pensions. The region is a Paradise for Pensionnaires. **Vevey**, pop. 11,781, is about 12 miles from Lausanne, and **Clarens**, another favourite spot, is 2½ miles farther on. Then comes **Montreux**, and the next station is **Territet-Glion**, whence a very steep railway leads to the **Rochers-de-Naye** (6723 feet), a noted panoramic station, with a view extending Northwards to the Bernese Oberland and in the contrary direction to the Range of Mont Blanc. In less than a mile more the famous **Castle of Chillon** is passed. **Villeneuve**, pop. 1751, is the terminal point of the steamers. Two miles and a half away to the West the River Rhone falls into the Lake, and deposits there an enormous mass of matter brought down from the mountains.

The line now enters the Rhone Valley, and after passing **Aigle**, pop. 3897 (the station for Sepey, Ormont-dessous, and Ormont-dessus), and **Bex**, pop. 4561, GRAND HOTEL DES BAINS (noted for its salt-mines and salt-baths), quits the Canton Vaud, and crossing to the left bank of the river, enters the **Canton Valais**. Shortly afterwards it passes through a small tunnel, and arrives at

[1] Part of the grounds of the house in which Gibbon lived from 1783 to 1793 is now occupied by the Hotel Gibbon.

St. Maurice (St. Moritz), 1368 feet, 417 mètres; pop. 2162. This is one of the oldest places in the Canton. The Abbey here is said to have been founded in the 4th century. The town lies about midway between the Dent du Midi (on its West) and the Dent de Morcles, 9639 feet, 2938 mètres (on its East). While in the Station, notice the Hermitage on the West, and the curious path to it, winding up the cliff.

[At St. Maurice the line from the N. shore of the Lake of Geneva meets that coming from Geneva round the S. side of the Lake, *viâ* Annemasse, Thonon, Evian and Bouveret. This latter line belongs to the Paris, Lyons and Mediterranean Railway. It is the best route to take if going from St. Maurice to Geneva, or to Chamonix. The first station upon this line is at **Monthey** (7 kils. from St. Maurice), at the entrance of the Val d'Illiez, famous for its remarkable assemblage of erratic blocks, some of which are 60 to 70 feet long. See *Essai sur les Glaciers et sur le terrain erratique du bassin du Rhone*, by Jean de Charpentier, 8vo, Lausanne, 1841: pp. 131-143.]

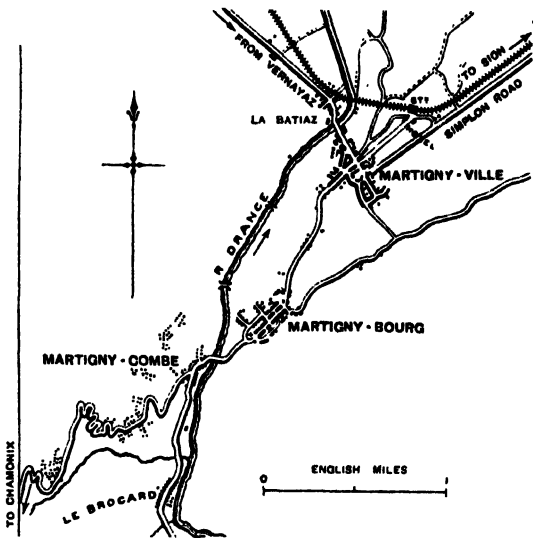


LAUSANNE TO VISP AND ZERMATT.

Soon after leaving St. Maurice the valley begins to open out again. Between the stations Evionnaz and Vernayaz the **Pissevache** fall is passed, and can be seen very well from the windows of the train. **Vernayaz** (HOTEL DE LA GARE, close to the station) is the station for those who wish to proceed to Chamonix *viâ* Salvan. For Plan, see my *Guide to Chamonix and the Range of Mont Blanc*, 8vo, London, 1897; chap. xiv. One can walk to Salvan in 70 min. from Vernayaz and return in 40 min. It is also the station for the **Gorges of Trient**, which are 12 min. walk distant. One of the finest ravines in the Alps; cool and comfortable on the hottest day, with good hotel, GRAND HOTEL DES GORGES DU TRIENT & HOTEL VICTORIA, two minutes from the entrance. The railway hereabouts runs close alongside the great Simplon Road. A round tower (la Batiaz) will

be seen shortly before arriving at Martigny, which is a remnant of a *Château* that belonged to the early Bishops of Sion.

Martigny, 1539 feet, 475 mètres; pop. 4717; is made up of Martigny-Ville, Martigny-Bourg, and Martigny-Combe. It is the station for the Great St. Bernard route, or for those going to Chamonix *viâ* the Col de Balme or the Tête Noire, and it is to be the Terminus of the Electric Railway to Chamonix, *viâ* Vernayaz. **Hotels.**—GRAND HOTEL CLERC; GRAND HOTEL DU MONT BLANC. HOTEL DU GRAND ST. BERNARD, and HOTEL-PENSION RESTAURANT DE LA GARE, both



PLAN OF MARTIGNY.

against the Station. HOTEL DE L'AIGLE, and HOTEL NATIONAL in Martigny-Ville. At Martigny the River Rhone makes a bend at right angles to its lower course, the valley broadens considerably, and one can see up it for a long distance. One of the most prominent natural features at this part (on the south side) is the small but rather striking peak called the **Pierre à Voir,** 8120 feet, 2476 mètres; which, though presenting sheer cliff on the side of Saxon and apparently inaccessible, can be ascended easily from several directions. Between the stations of Riddes and Ardon the base is passed of a mountain called the **Haut de Cry,** 9701 feet, 2956 mètres, on which the guide J. J. Bennen and others lost their lives on February 28, 1864, through disturbing unconsolidated snow. See *Scrambles amongst the Alps,* Appendix A. The railway crosses to the right bank of the Rhone at Riddes, and 12 kils. afterwards arrives at

Sion (Sitten), 1700 feet, pop. 6048, the capital of the Canton Valais. **Hotels.**—GRAND HOTEL DE SION; HOTEL DU MIDI; HOTEL DE LA POSTE. Get out here for the Val d'Hérens. In the Introduction to the fifth volume of his *Documents*, the Abbé Gremaud gives many details respecting the ecclesiastical and other buildings of Sion. He says that there was a Christian Church here *before* A.D. 377. The next station after Sion is at **St. Léonard**, where a fierce battle was fought in 1375 (in consequence of the assassination of Bishop Tavelli, see p. 8), which ended in the defeat and flight of the *Seigneurs*.

"At the news of this horrible crime, the patriots of Conches, Brigue, Louèche, Sierre and Sion swore that they would avenge the death of their Bishop. They flew to arms, and invaded the murderer's domains. After having taken the Château de Granges, they made for that of Ayent" [4 miles N.E. of Sion], "but near the bridge of St. Léonard they found themselves in the presence of the vassals and allies of Antoine de la Tour. The combat began; and here, as at Louèche, the *seigneurs* were conquered by the peasants. The armour glittering with gold, and the helmets with their floating plumes, were crushed under the avenging clubs. . . Pursuing their victory, they burnt the castles of Ayent and Conthey, and then laid siege to that of Châtillon."—*Hilaire Gay.*

Sierre (Siders), ten miles from Sion, 1765 feet, 538 mètres; pop. 1833. **Hotels.**—HOTEL BELLEVUE (good, English landlady) close to the station; HOTEL DE LA POSTE; HOTEL TERMINUS. Sierre is the best centre for excursions in the Valley of the Rhone, and is "perhaps the most ancient place in this part of the Valais, since it is mentioned in the act of foundation of the Abbey of St. Maurice, A.D. 516."—*Abbé Gremaud.* A winter station recommended by British Physicians for rheumatism, nervous debility, and chronic bronchitis, or for those who require dry and bright climate. Tobogganing, skating, trout fishing. The HOTEL DU PARC, at Montana, 3200 feet above Sierre, —a favourite place for winter sports—commands magnificent views of the central Pennine Alps. Persons bound for Zinal get out at Sierre. Nine kils. farther on, just before arriving at Souste, the railway recrosses to the left bank of the Rhone.

Souste or Suste, 2044 feet, 623 mètres; HOTEL DE LA SOUSTE; is the station for Leuk or Louèche, pop. 1592. There is a decent little restaurant just outside the station. Those who are bound for Leukerbad (Louèche-les-Bains), and the Gemmi Pass, get out here.

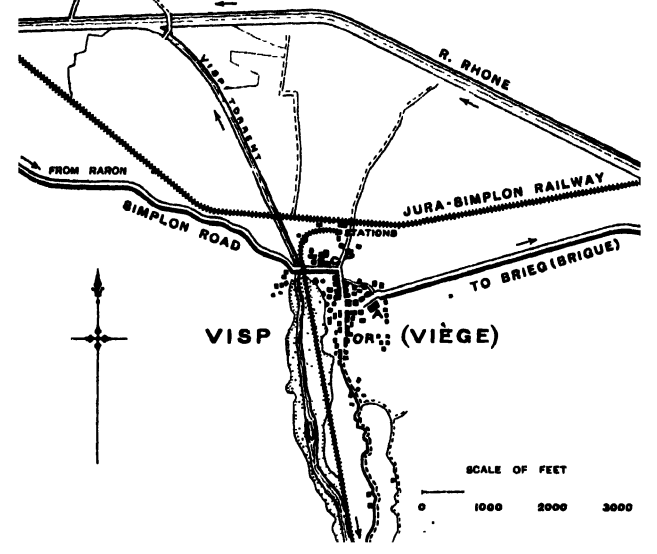
[A good pedestrian can go on foot from Suste to Leukerbad as quickly as a carriage, as there are two places where much time can be saved by 'cutting zigzags,'—one just after crossing the railway, whence the path goes direct to the town of Leuk (which is 430 feet above the Rhone), and avoids a very long detour that the *road* makes towards the East. Enquire the way before leaving the Station. The second place where time can be saved by 'cutting' is just after crossing the large bridge over the R. Dala. Take the first foot-path to the right, which leads direct to the village of Inden, where the road is again rejoined. From Suste to Leukerbad takes about 2 h. 40 min. on foot, and Leukerbad to Suste 1 h. 55 min.

After passing Souste, the railway runs closely alongside the Rhone for 18 kils. **Tourtemagne**, 2073 feet, 632 mètres, is the station for the Turtmannthal and Gruben, whence one can go by the Augstbord-pass to St. Nicolas in the Nicolaithal. The *village* of Turtmann, pop. 519, HOTEL DE LA POSTE, is on the Simplon Road, a kil. south of

the railway-station. **Gampel,** 2087 feet, 636 mètres; **Hotel**– AUBERGE LOETSCHENTHAL (14 beds); is the station for the Lötschenthal. The village is ¾ mile away to the north, at the entrance to the valley. A little higher up the Rhone valley, on the same side, there is the small village of Bas-Châtillon or Niedergestelen, with the ruins of the castle (destroyed in 1379) which was the stronghold of the De la Tour family. See chap. i. There was a priory here in the 14th century. [Gremaud, vol. v, p. civ.]

The next station, **Rarogne (Raron),** 2113 feet, 644 mètres (small Inn, the proprietor of which also keeps the Hotel Nesthorn at Loetschenried in the Lötschenthal), is not at that village, but lies about midway between it and the miserable hamlet Turtig (no inn), on the Simplon Road. The way to the Ginanzthal lies through Turtig. See chap. vii. The Rarogne family was one of the most important in the Valais. See chap. i. The Abbé Gremaud says that its origin "is very uncertain," and that the first Rarogne known was Henri, who was living in 1210, and was *vidomne* of Louèche and Rarogne. The Church of Rarogne, which will be seen perched on a rock, was built in 1512 on the site of a castle that was burnt in 1417.– *Abbé Rameau.*

About 4 kils. after passing Rarogne, the railway leaves the Rhone and makes for the entrance to the Vispthal. Get your small things together, for in a few minutes you will be at Visp (Buffet, good), where, as there is break of gauge, *all for Zermatt must change.*



A. HOTEL DE LA POSTE. B. HOTEL DES ALPES. C. HOTEL DU SOLEIL.

CHAPTER VII.

UPON THE VALLEY OF ZERMATT (NICOLAI THAL).

VISP—THE ZERMATT RAILWAY AND THE ABT SYSTEM—NEUE BRUCKE—STALDEN—TÖRBEL—KALPETRAN—ST. NICHOLAS—ASCENTS FROM ST. NICHOLAS—PASSES FROM ST. NICHOLAS—BIRTHPLACE OF THOMAS PLATTER—HERBRIGGEN—RANDA—ASCENTS OF THE WEISSHORN, DOM, TÄSCHHORN, ETC.—PASSES FROM RANDA—TÄSCH—THE TÄSCH ALP AND VALLEY—ASCENTS OF THE ALLALIN, ALPHUBEL, AND RIMPFISCHHORN—PASSES FROM THE TÄSCH VALLEY—TÄSCH TO ZERMATT.

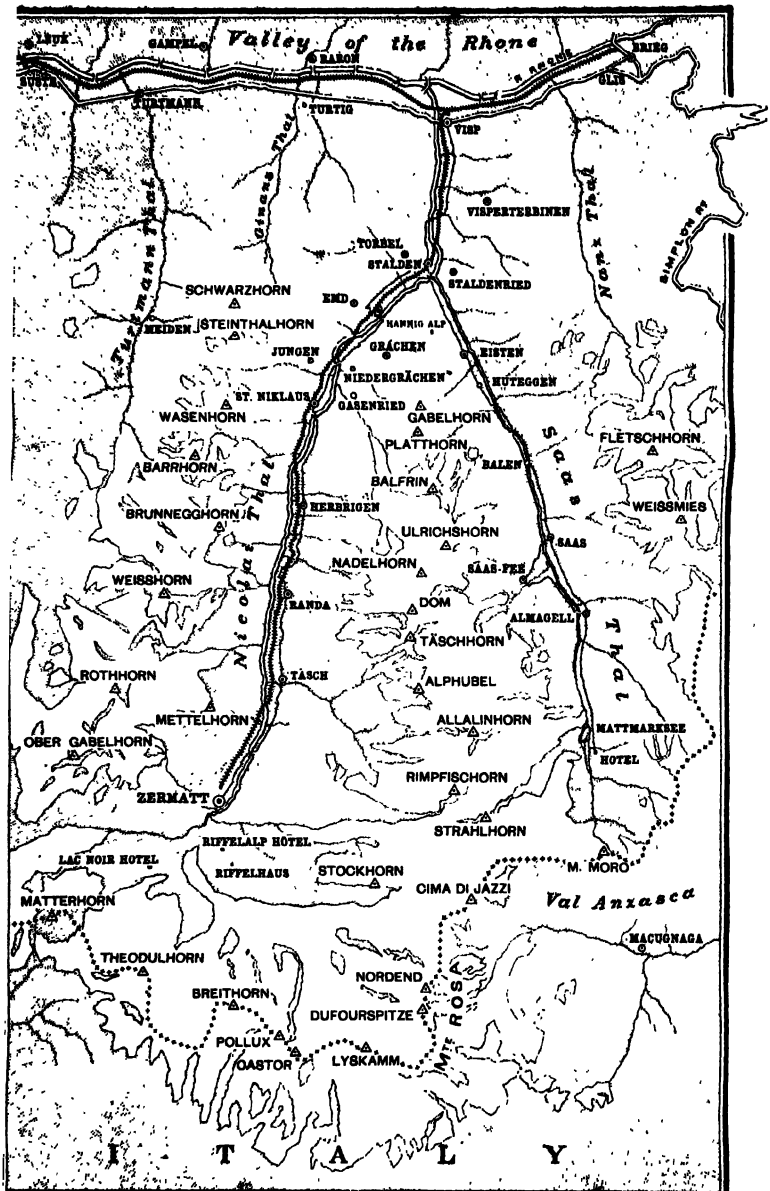
Visp, Viège or Vispach, 2165 feet, 660 mètres; 934 inhabitants; formerly called Vesbia, Vespia, or Vespie, is the chief town (*chef-lieu*) of a district in the Canton Valais,[1] to which it gives its name. The District de Viège (or Bezirk Visp) contains 21 Communes, namely—

Name.	Pop.	Name.	Pop.
Almagel (Almengell)	190	Randa (Randah)	271
Balen (Aballa)	215	St. Niklaus (St. Nicolas)	922
Baltschieder (Balschieder)	190	Stalden	443
Emd (Embd, Emdt)	263	Staldenried	284
Eisten (Eysten)	250	Täsch	251
Eyholz (Eiholz)	213	Törbel	571
Fée (Fee)	280	Visp (Vispach, Viège)	934
Grächen	389	Visperterbinen	630
Gründen	32	Zeneggen (Eggen)	228
Grund, im (Gruden, Saas)	429	Zermatt	741
Lalden	188	Total	7914

Several of these Communes [Baltschieder, Eyholz, Gründen and Lalden], although near Visp, are in the Rhone Valley.

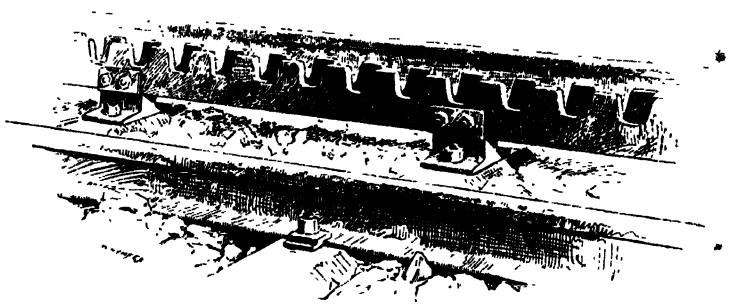
Hotels.—HOTEL DE LA POSTE; HOTEL DU SOLEIL; HOTEL DES ALPES (close to the Railway Stations). Buffet at the Jura-Simplon Station good, prices reasonable; beer 25 centimes per glass. Post and Telegraph. Numerous general shops.

[1] The Canton Valais (Kanton Wallis) had a population at the last (1900) census of 114,438 persons. Its area is 5247 square kilomètres, of which more than half are classed 'unproductive soil.' Of the unproductive soil, 971 sq. kils. are occupied by glaciers. In area the Valais is the third largest of the Swiss Cantons, but in population it stands twelfth. It has a smaller proportion of population to area than any of the Cantons, with the exception of Uri and Grisons. It is the most strictly Catholic Canton in the Confederation, there being nearly 117 Catholics to every Protestant. See *La Population des Communes de la Suisse*, Bern, 1901.



PLAN OF THE NICOLAI THAL, SAAS THAL, ETC

The **Station of the Zermatt Railway at Visp**[1] is alongside that of the Lausanne-Visp Railway. Tickets for Zermatt and intermediate stations are taken at the booking-office of the latter line. The line is 35 kilomètres (or 22 miles nearly) in length. There are stations at Stalden, Kalpetran, St. Nicholas, Herbriggen, Randa and Täsch. The difference of level between Viège and Zermatt (3200 feet) might have been overcome by a ruling gradient of 1 in 36. If anything like this had been employed, very heavy and costly works would have been necessary; but they have been avoided by adopting the *système* Abt. Though short tunnels are numerous, there are no great cuttings or embankments on the Zermatt Railway. The principal bridge crosses a torrent (Muhlebach) which falls into the Vispbach about half-way between Stalden and Kalpetran. This is 220 feet long, and 144 feet above the bottom of the ravine. See p. 108.



THE "SYSTÈME ABT."

The Abt system aims at the avoidance of heavy works. Where the ground is flat the line skims the surface, and where there is an abrupt rise in the floor of the valley there are steep gradients upon which a third, rack rail (*crémaillère*) is laid. The line presents therefore a succession of moderate inclines and very rapid ones. In some places the railway rises as much as one foot in eight. The third rail is not used when the gradients are less than one in forty, and is laid over only five miles. It is composed of two plates of steel which are bolted together in such a manner that the teeth alternate. The engines have two mechanisms—one for the ordinary rails and the other for the *crémaillère*. It is said that there are never less than four teeth biting at a time. In ascending the steep inclines the pace drops to four miles an hour and less. Great caution is used in *descending;* and, on the sections with the *crémaillère*, the trains

[1] Visp was formerly considered unhealthy, probably from its proximity to marshes. Dr. Schiner says (in his *Descrip. du Dép. du Simplon*), "it is undoubtedly these marshes . . . that produce in the lower part of Viège, in summer, the innumerable swarms of flies and gnats which destroy rest at this season, and disgust one by seeing the dishes covered with these tiresome insects." Since the embankment of the Rhone, there is much less marsh land in the Valais, and musquitoes have diminished at Visp.

seldom travel so fast as three miles an hour. There are several guardians to watch the line, who inspect the whole of it between the passage of each train. The early trains, during the season, are generally overfilled with passengers, eager to see the views. The evening ones are less crowded. The trains from Visp to Zermatt *wait* for those of the Lausanne-Visp Railway, and sometimes wait a considerable length of time. Tickets from Visp to Zermatt, or from Zermatt to Visp permit the holders to descend at intermediate stations and resume the journey by a later train, but they are only good for the day on which they are issued. Return tickets are good for two days. The Fares are

	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
Visp to Stalden . .	3. 55	2. 25	6. 40	4. -
Kalpetran . . .	4. 90	3. 05	8. 80	5. 50
St. Nicholas . .	7. 55	4. 75	13. 60	8. 50
Herbriggen . .	9. 80	6. 10	17. 60	11. -
Randa . . .	11. 55	7. 25	20. 80	13.
Täsch . . .	13. 35	8. 35	24. -	15.
Zermatt . . .	16. -	10.	28. 80	18.

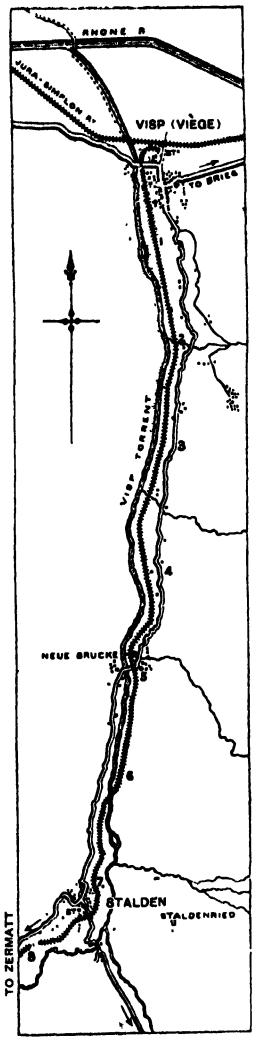
Visp is picturesquely situated on the left bank of the Rhone Valley, at the entrance to the Visp Thal. Five miles to the south this valley divides,—the western branch (the Valley of St. Nicholas or Nicolai Thal) leading to Zermatt, and the eastern one (Valley of Saas or Saas Thal) to the villages of Saas and Saas-Fée, and to the Monte Moro Pass.

There are a remarkable number of points of view in the Nicolai Thal (Valley of Zermatt), some of which are only seen from the *path*, and others only from the *railway*. A tourist who wishes to obtain a comprehensive idea of the valley should go one way by the path. The hotels on the route are at convenient distances apart. Some of the points of view are indicated by arrows upon the four little plans which accompany the text. The walking times between the several villages are about these -

Ascending.	h.	min.	Descending.	h.	min.
Visp to Stalden . . .	1	30	Zermatt to Täsch . . .		55
Stalden to St. Nicholas .	1	55	Täsch to Randa . . .		35
St. Nicholas to Randa .	1	45	Randa to St. Nicholas .	1	30
Randa to Täsch . . .		40	St. Nicholas to Stalden .	1	15
Täsch to Zermatt . . .	1	5	Stalden to Visp . . .	1	15
Total . . .	6	55	Total . . .	6	

The path to Zermatt turns rather sharply to the right at the southern end of Visp [the other path leading straight on goes to Visperterbinen, 4396 feet, 1340 mètres; small hotel; pop. 605, seldom visited by tourists. A church was built there in 1256], and soon gets near the Visp torrent. So far as Stalden it is a fairly good mule-path, but it has scarcely been improved during the last forty years. When the largely increasing number of visitors rendered a *road* from Visp

to Zermatt desirable, it was not found possible to carry one right through. Though some support was rendered by the natives at the southern end of the valley, the objections of the northern communes could not be overcome; and, at the present time, while there is a carriage *road* in the southern and upper end of the valley, at the northern end [Visp to St. Nicholas] the mule-*path* retains its primitive simplicity.



VISP TO STALDEN.

For the first five kils.[1] from Visp the road and railway keep close together. Numerous vineyards hereabouts. But at **Neue Brucke** (2280 feet, 695 mètres) the path crosses to the left bank of the stream by a bold single-arch bridge. The mountains seen in front when coming up this part of the valley are at the Northern end of the Saas Grat or range of the Mischabelhörner (separating the Nicolai Thal from the Saas Thal). The snow peak is the **Balfrin (Balenfirn),** 12,473 feet, and the tooth of rock a little to its right is the Gabelhorn, 10,276 feet, hitherto unascended. At 6 kils. from Visp the railway also crosses the torrent, and commences the ascent of the first of the steep inclines, upon which the third, rack rail is laid.

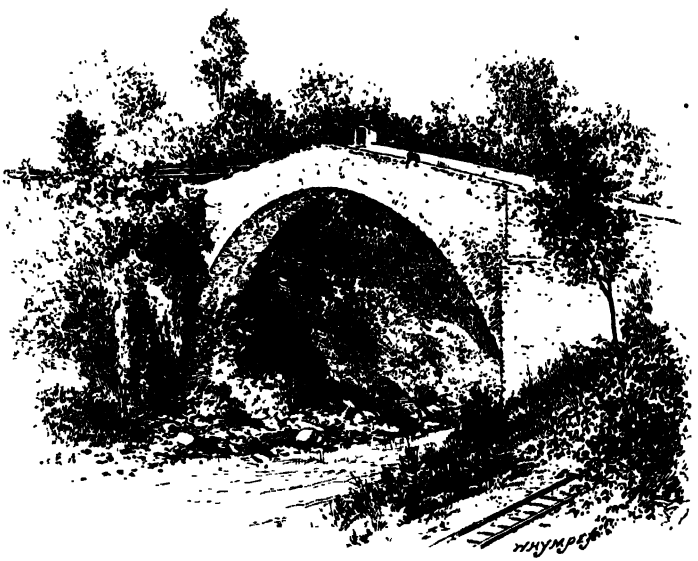
Stalden, 2608 feet, 795 mètres; pop. 443; is 7½ kils. from Visp and 27½ kils. from Zermatt. Travellers by rail *change here for Saas.* Post and Telegraph. **Hotel.**—HOTEL STALDEN (kept by the Proprietors of the Hotel de la Poste at Visp, who are also Proprietors of three hotels at Saas-Fée). The path to the Saas Thal leads past the Railway Station. See chap. xii.

"Stalden, says a Latin Chronicle, had its own particular lords, but they sold their property to the natives, and went over to the Valley of Aosta. Their tower is still in existence, but the inhabitants are free."—*Abbé Rameau.* A good deal of Muscat wine is made in this neighbourhood. It used to be procurable at 70 to 80 centimes a bottle. Prices have risen.

A pleasant excursion can be made from Stalden to **Törbel,** one of the oldest villages in the valley, pop. 571, which, though not far

[1] The distances marked upon the accompanying Plans in the text (Visp to Stalden, Stalden to St. Nicholas, etc.) are according to the kilomètre posts on the *Railway.* They give also a fair idea of the distances by road.

away, is out of sight. About 1½ hs. going up; 30 min. descending. Törbel is situated on a slope facing the south; and, although 4892 feet high, is warmer and more sunny than the villages lower down, which for a large part of the day are shut out from the sun. Red currants ripen there. Törbel has a reputation for cheese. Anyone who expects to stand a long siege should buy it, for it is said that it will keep for fifty years![1] The Church of Törbel was considerably damaged by the earthquake of 1855, and its roof fell in.



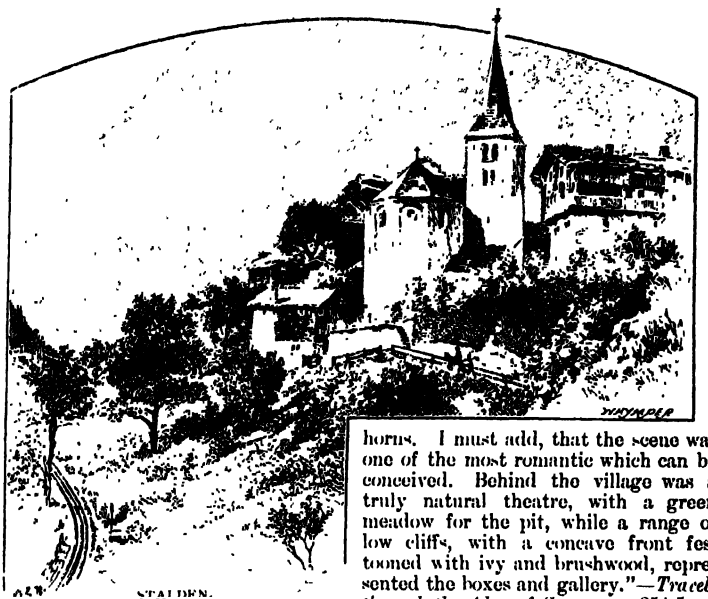
NEUE BRUCKE.

"I had an opportunity at Stalden," said Prof. J. D. Forbes, "of witnessing here a remarkable scene on my last visit."

"A comedy was to be acted by peasants dressed in costume, who were to perform on a stage erected in the open air. There were not less than forty actors, the female parts being performed by men, and the costumes were elaborately and ingeniously devised in some cases not without propriety and taste. I was able to remain long enough to see only the opening of the piece named *Rosa von Tannenburg*, which was preluded by a procession of the actors, amongst the most conspicuous of whom were three devils attired in tight suits of black, with horns and tails, the senior wearing goat's horns and the subordinates those of the chamois. The entertainment was under the immediate patronage, and even direction of the clergy. The morning mass at Saas was said that day at four, instead of five o'clock, in order to allow the pastor and his flock to reach Stalden in good time, and one of the *cicaires* of Stalden (who

[1] Lord Minto, when at St. Nicholas in 1830, was struck by the cheese that was set before him by the Curé. "I had coveted," he said, "the remains of a delightful piece of old cheese upon which we had feasted . . . and he presented it to me. . . The prize which I carried off was about twenty years old, perfectly fresh and pungent, like a fine old ewe-milk cheese in Scotland. . . We had one cheese put before us which we were told was thirty years old; it was perfectly fresh and good."

correspond to our curates) seemed to be the master of ceremonies, for he was frequently seen in earnest conversation with the junior devil with the chamois



STALDEN.

horns. I must add, that the scene was one of the most romantic which can be conceived. Behind the village was a truly natural theatre, with a green meadow for the pit, while a range of low cliffs, with a concave front festooned with ivy and brushwood, represented the boxes and gallery."—*Travels through the Alps of Savoy*, pp. 354-5.

The Fares from Stalden are—

	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
Stalden to Visp (Viège) . .	3. 55	2. 50	6. 40	4. —
,, Kalpetran . . .	1. 80	1. 15	3. 20	2. —
,, St. Nicholas . .	4. —	2. 50	7. 20	4. 50
,, Herbriggen . .	6. 70	4. 20	12. —	7. 50
,, Randa . . .	8. 45	5. 30	15. 20	9. 50
,, Täsch . . .	10. 25	6. 40	18. 40	11. 50
,, Zermatt . . .	12. 45	7. 80	22. 40	14. —

A pedestrian bound for Zermatt, on leaving Stalden, will save time by taking the path *which leads away in front of the Hotel.* Between Stalden and Kalpetran, the prominent peak seen to the south (*i.e.* looking up the valley) is the **Brunnegghorn**, 12,619 feet, 3846 mètres. The summit of the Weisshorn, 14,803 feet, 4512 mètres, can also be seen behind the Brunnegghorn (a little to its right), from Stalden *nearly* up to Kalpetran. The large bridge over the Mühlebach is passed just before kil. 9, and shortly afterwards the path for a kilomètre and a half is of a superior order, and is carried along a shelf cut out of the slopes, nearly at a level. The Mattervisp torrent, at this part, runs through a deep gorge or defile, which is *better seen from the railway than from the path.*

Kalpetran, 10·9 kils. from Visp, 24·1 kils. from Zermatt; 2907 feet, 886 mètres. This is only a small group of châlets, no inn. The path crosses here to the right bank of the torrent, and the railway does the same at kil. 12. The Fares from Kalpetran are–

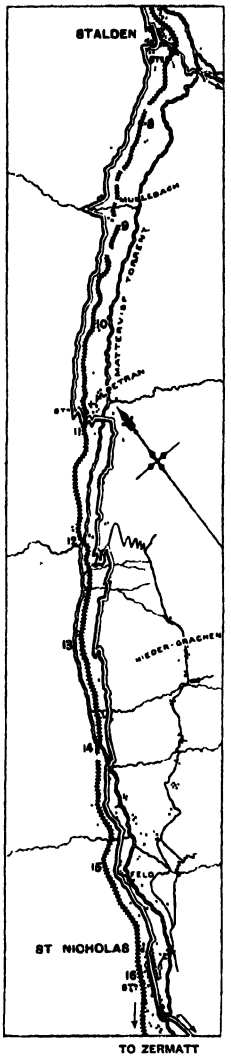
	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
Kalpetran to Visp (Viège) .	1. 90	3. 05	8. 80	5. 50
,, Stalden . .	1. 80	1. 15	3. 20	2. 00
,, St. Nicholas .	2. 70	1. 70	4. 80	3. 00
,, Herbriggen .	1. 90	3. 05	8. 80	5. 50
,, Randa . .	6. 70	4. 20	12. 00	7. 50
,, Täsch .	8. 45	5. 30	15. 20	9. 50
,, Zermatt . .	11. 15	6. 95	20. 00	12. 50



BRIDGE OVER THE MUHLEBACH.

From kil. 12 to kil. 14 the railway runs immediately alongside the torrent, and gives excellent views of its tumultuous eddyings. This is one of the most interesting parts of the line. *Keep on the side of the water.* These views cannot be seen from the path, which mounts high above the stream, and at this part becomes undulatory. At kil. 14 the railway recrosses to the left bank, and mounts to St. Nicholas (Niklaus or Nicolas). The ascending and descending trains frequently pass here, and a long halt is usually made. There is a Buffet, with little to eat. Beer 30 centimes per glass.

[1] It is mentioned under the name Kalpotran in a document of 1330 [Gremaud, No. 1788].



St. Niklaus (Nicolas), 3678 feet, 1121 mètres; pop. 922; 16 kils. from Visp, 19 kils. from Zermatt. Post and Telegraph. Barber (shaving 20 centimes), Tailor, Baker, Shoemaker, Watchmaker and general shop. **Hotels**: GRAND HOTEL-PENSION ST. NICOLAS; HOTEL-PENSION LOCHMATTER; RESTAURANT MONT ROSE (beds), open all the year. English Church Service (C.C.C.S.) is held on Sundays in the School Room.

St. Nicholas is the largest Commune in the Valley. The Village is in an agreeable position, on the left bank of and close to the Mattervisp torrent. It is warmer than Zermatt, and cooler than Visp. In winter there is not ordinarily at any time more than a mètre of snow on the ground. In July and August temperature seldom sinks so low as 45° F. at night, or rises above 72° F. in the day; and, as a number of small and easy excursions can be made from it, it is one of the most eligible places in the Valley.[1] There is a carriage-road to Zermatt, and *voitures* can be had at a somewhat lower cost (for three or more persons) than third-class railway fares.

The principal mountains visible from the village are the Brunnegghorn, 12,619 feet, 3846 mètres; the Petit Cervin, 12,750 feet, 3866 mètres; and the Breithorn, 13,685 feet, 4171 mètres. Slightly S. of E. of St. Nicholas there is a mountain called the **Gabelhorn** (not to be confounded with the Ober and Unter Gabelhorns at Zermatt), which has not been ascended, and is reputed to be inaccessible. The height given for it on the Siegfried Map is 3135 mètres (10,276 feet), and seen from St. Nicholas it is apparently higher than the Platthorn, lying a little to its south, to which the height of 3249 mètres (10,660 feet) is assigned. The true summit of the Platthorn, however, is not seen from St. Nicholas. At the top of the Gabelhorn there are two rocky towers,—the northern is the loftier, and is the culminating point of the mountain. It is an appetizing morsel for a mountaineer. This

[1] It appears to be healthy. I was informed by M. the Curé in 1894 that he had recently buried one of his parishioners who had attained the age of 90, and another shortly before who had got to 96; and that there were then about 20 persons living of the age of 70 and upwards.

peak can be seen from Visp (to the right of the Balfrin), and upon part of the way between Visp and Stalden.

The village of St. Nicholas was much damaged by the earthquake of 1855, and was not thoroughly restored several years afterwards. The Church suffered considerably. This edifice has also been twice nearly destroyed by avalanches from the Sparrhorn, which descend through a ravine on the west of the village. An avalanche in 1618



ST. NICHOLAS.

wrecked the tower and choir, and another in 1750 destroyed the remainder. Avalanches fall not unfrequently through this ravine, but they are sometimes deflected towards the north, and do no harm. The three brothers Knubel who perished on the Lyskamm in 1877 (see chap. x), and Joseph-Marie Lochmatter who was killed on the Dent Blanche in 1882 (see chap. ix) were buried in the churchyard, on the east side of the church. There is also a monument to Roman Imboden, who was killed on the Lyskamm, Sept. 10, 1896. See chap. x.

Excursions from St. Nicholas.—**Ascents** of the **Grabenhorn,** 11,072 feet, 3375 mètres (12-13 hs.); **Gabelhorn,** lower peak, and **Platthorn,** 10,660 feet, 3249 mètres (10-11 hs.); **Ulrichshorn,** 12,891 feet, 3929 mètres (12-13 hs.); **Hohberghorn,** 13,865 feet, 4226 mètres (13-

14 hs.); **Balfrin (Balenfirn or Balfrinhorn)**, 12,473 feet, 3802 mètres (9-10 hs.; or it can be crossed to Saas-Fée in about 15 hs.); **Brunneggborn**, 12,619 feet, 3846 mètres (12-13 hs.); **Sparrhorn (Sparrenhorn)**, 9810 feet, 2990 mètres; **Festihorn**, 10,660 feet, 3249 mètres; **Wasenhorn**, 10,958 feet, 3340 mètres; **Rothhorn**, 10,702 feet, 3262 mètres; **Stellihorn**, 11,204 feet, 3415 mètres; **Schwarzhorn**, 10,512 feet, 3204 mètres; and **Barrhorn**, 11,880 feet, 3621 mètres (from 8 up to 10-11 hours).

Passes.—**The Ried Pass**, about 11,800 feet, from St. Niklaus to Saas-Fée, between the Balfrin and Ulrichshorn (10-12 hs.). This is one of the oldest passes between the Nicolai Thal and the Saas Thal. **The Ferrichjoch or Ferrichlücke**, 9479 feet, 2889 mètres, between the Platthorn and Ferrichhorn is another pass between the two valleys; and leads either through the village of Gasenried, or that of Hellenen, to the south of the Platthorn, and descends either to Saas, or to Huteggen in the Saas Thal (9-10 hs.). **The Gabelhorn Pass.**—I made another pass with Alexandre Lochmatter, in 1895, between St. Niklaus and Huteggen, by going over the Gabelhorn just below and to the south of the towers at the summit. Excluding halts, the time occupied was 11 hs. This pass is about 690 feet higher than the Ferrichjoch. Neither pass can be recommended. In each case, a great part of the way near the summit is over loose stones and boulders, which are unpleasant to traverse. There is a fourth way of getting into the Valley of Saas by passing through the village of Grächen and across the **Hannig Alp**, 6923 feet. From St. Nicholas to the top takes about 2¾ hours. Good place for a pic-nic; châlets, milk. A path upon the Saas Thal side descends upon the hamlet of Huteggen in 2 hours; or from the top of the Alp one can go down through forest to Stalden. Steep way.

To the West of St. Niklaus the **Jungpass**, 9823 feet, 2994 mètres, and the **Augstbordpass**, 9492 feet, 2893 mètres, lead to Gruben in the Turtmannthal. At Gruben there is the HOTEL DU WEISSHORN, and a quarter of a mile higher up the valley, at Meiden, there is the HOTEL DU GLACIER DE TOURTEMAGNE. Both of these routes go through the village of Jungen, 6391 feet, 1948 mètres, but they separate shortly afterwards,—the former passing between the Furggwanghorn, 10,377 feet, 3163 mètres, and the Rothhorn, and the latter between the Steinthalhorn, 10,213 feet, 3113 mètres, and the Schwarzhorn.

In 1896, with Alois Pollinger, I found a way of getting to St. Niklaus from Turtig in the Rhone Valley in 9 hs. 25 min., *vid* the Ginanzthal, and this route, should it become known, would I think find favour, as it passes through a delightful valley (hitherto quite unvisited) which affords very pleasant walks.

The path for the Ginanzthal Pass commences at Turtig, 2123 feet, 647 mètres, and rises steeply towards the south by zigzags through forest. Interesting view over the Valley of the Rhone and of the mountains on the farther side. In 1½ hs. it arrives at **Unterbach**, situated on open ground, 4036 feet, 1230 mètres; pop. 336; Church; no regular inn, but food can be obtained. [Two kils. to the East there is the village of **Birchen**, 4751 feet, 1448 mètres; pop. 418; Church. This is a separate Commune.] The ground here is

moderately flat (dotted all over with châlets), and cannot be seen from the Rhone Valley. Paths in various directions. Enquire the way. In 1½ hs. from Unterbach there are the **châlets of Waldmatten**, 5246 feet, 1599 mètres. Milk can be had. The path then approaches the stream flowing down the Ginanzthal, and keeps near it (on its right bank), up to the head of the valley; passing at first through forest, and in 1½ hs. a group of seven buildings at the **Obere Ginanzalp**, 7441 feet, 2268 mètres. End of paths. After the beginning of September there is no one either here or higher up the valley. Steer slightly East of South towards the nameless peak marked 2962 mètres (9718 feet) on the Siegfried Map; and go to the E. of the little lake called the **Ginanzsee**, 8452 feet, 2576 mètres. Grass ends there. Take advantage of the snow beds under peak 2962, and steer S.W. across them to the nearest depression on the E. of the Dreizehnenhorn. The summit of **the Col** is 2 hs. from the Obere Ginanz châlets, and 50 mètres or thereabouts lower than peak 2962,—*i.e.* about 9550 feet above the sea. The ridge that is crossed runs almost precisely due East and West. The lake and the upper part of the Ginanzthal are well seen from the Col. To the N., Altels, the Balmhorn, and the Bietschhorn are prominent; towards the E. the view includes the Fletschhorn, Laquinhorn, and Weissmies, and the entire range of the Mischabel; and turning round to the S. and W. there is first Monte Rosa and all between it and the Breithorn, the Brunneggthorn and Weisshorn, Schwarzhorn and Dreizehnenhorn. On the southern side of the Col there i the (nameless) *collon* leading to the Augstbordpass. Descend over stony slopes to the bottom of it, turn to the left (*i.e.* east), and go through Jungen to St. Nicholas. Time, Col to Jungen, 1 h. 40 min.; Jungen to St. Nicholas, about 1 h. 15 min.

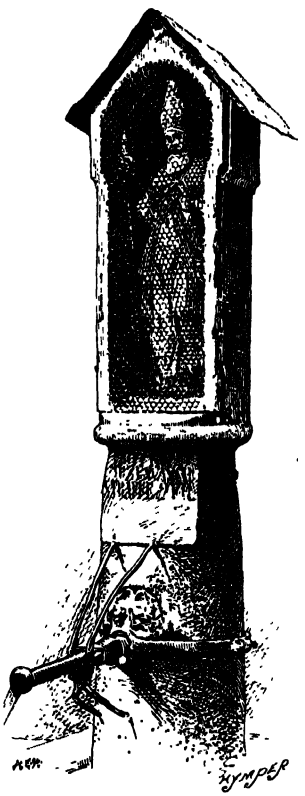
Minor excursions and quiet walks can be taken on the West of St. Nicholas to the villages of Jungen, Emd, and Törbel. **The path to Jungen**, 6391 feet, 1948 mètres, is in shade most of the way. It starts at the Railway Station. Time ascending, about 1 h. 50 min.; descending, 1 h. is quick time. To get to the village of **Emd**,[1] go from St. Nicholas by the ordinary path as far as the railway bridge at kil. 14. On the western side of this bridge there is a small and rather rough path leading in about 2 hs. to Emd (4450 feet, 1356 mètres, pop. 206), which is situated upon a steep slope of the Emderberg, - a prolongation of the lower slopes of the Augstbordhorn. [I have been unable to find the fowls 'shod with iron to enable them to keep on their legs,' which are referred to in Baedeker's *Switzerland*.] From Emd one can either descend to Kalpetran Railway Station, or get in 1 h. 20 min. by a fair path to **Törbel**. Descend thence to Stalden, and return home by train.

Upon the East of St. Nicholas, perhaps the most agreeable little excursion that can be made is to the lower **Ried Glacier**. This can be done either by passing through the village of Gasenried, or, by a more direct route, *viâ* the village of Hellenen and the Schallbett Alp. The latter way is preferable, as the path passes almost entirely through forest, and is in shade. Path good. Time from St. Nicholas to the Schallbett Alp, 6916 feet, 2108 mètres, 3 hs. The lower glacier can be crossed easily. The 'ice-falls' from the upper glacier are well seen from it, but to view the upper plateau of the Ried Glacier, and the peaks which encircle it, a considerably greater

[1] This village is mentioned under the names of Embda, Embsa, Emda, and Empda in documents of 1324, 1330, 1339 and later. [Gremaud, Nos. 1504, 1590, 1788, etc.] In those times it was embraced in the Parish of Visp.

elevation must be gained. No part of the Ried Glacier can be seen from the bottom of the Nicolai Thal. Return home through Gasenried.

The villages of **Niedergrächen**, 4807 feet, 1465 mètres, and **Grächen**, 5305 feet, 1617 mètres, may also be made the subject of an agreeable excursion. They lie N.E. of St. Nicholas, on the way to the Hannig Alp. There is a house at the former village in which Thomas Platter the Reformer is said to have been born, —an ordinary châlet, which does not look nearly 400 years old. If it is actually the case (as they aver on the spot) that it is the original house and has not been renovated, one can readily credit the opinion of people in the valley that there are châlets in the Zermatt district which are 700 years old, and even more. This opinion, it seems to me, however, is not based on any firmer foundation than the knowledge that there are records which carry the history of the valley back to the 13th century.



THE PATRON SAINT (ST. NICHOLAS).

Thomas Platter was born at the little village Niedergrächen in 1499.[1] My mother, he says, was a Summermatter,[2] and her "father was one hundred and twenty-six years old. Six years before his death, I talked with him myself, and he told me that he knew ten men in the parish of Visp who were all older than he then was. When he was a hundred years old he married a woman of thirty and had a son by her."[3] Platter's father died so early in his life that he could not remember having seen him. His mother married again, and "almost all my brothers and sisters," he says, "had to go out to service as soon as they were able. Because I was the youngest, my aunts each had me in turn."

[1] An account of his early life, written by himself, was printed at Basle in 1840. A curtailed translation of this was contributed by Sir W. M. Conway to the *Alpine Journal*, vol. xii, pp. 380-90. The following extracts are taken from this very interesting article.

[2] There are various Summermatters now living at Randa.

[3] In Schiner's *Description du Département du Simplon*, at p. 226, when speaking of the Valley of Saas, there is the following remarkable statement.—"Les gens dans cette vallée parviennent beaucoup à un grand âge; il n'est point rare d'y compter plusieurs centenaires. On se souvient encore, que, lorsque la vallée s'assemblait pour prévenir de grands maux, on formait un cercle sur la place, qui n'était composé que de nonage-

"When I was about six years old I was taken to Eisten" [Saas Thal] "a valley within Stalden, where my mother's sister was married to a man by name Thomas an Riedijn, who lived in a farm called Imboden. The first year I had to tend the kids for him near the house. There I remember once sticking fast in the snow, so that I could scarcely get out. I had to leave my shoes in it and come home barefoot. The same peasant owned about eighty goats, which I had to tend in my seventh and eighth years. I was still so small that, when I opened the goat-pen, if I did not spring quickly behind the door, the goats knocked me down and trod upon my head, ears, and back. When I drove the goats across the Visp over the bridge, those in front ran into the corn-fields, and when I drove them out the rest ran in, so I wept and cried, for I knew well that I should be beaten at night. However, the goatherds of other peasants came to me and helped me, one big boy especially, Thomas of the Leidenbach. He pitied me and did me much kindness. So when we drove the goats up into the high and terrible mountains, we all sat and ate together. Each one had a shepherd's wallet fastened on his back, with cheese and rye bread in it.

.

Perhaps about half a year afterwards, I drove my goats again early one morning before the other goatherds (for I was the nearest) up over a spur, called the Wysseggen. There my goats went to the right hand up a little rock, a good stride broad, below which was a terrible precipice, certainly more than a thousand feet high – sheer rock. From the little rock one goat went after another up a steep place, their little hoofs clinging to the bunches of grass growing among the rocks. When they had all gone up I wanted to follow them, but I had not taken more than one step upon the grass before I could go no farther, nor could I step back upon the steep place, and I dared still less jump backwards, for I feared, if I did so, I should roll down and fall over the terrible precipice. So I remained a long while standing and waited for the help of God, being no longer able to help myself, except by holding on with both hands to a tuft of grass and standing with my great toe upon another tuft. When I was tired I raised myself off the tuft and put my other toe there. In this plight I was most afraid of the great lammergeiers, which were flying in the air below me; for I feared they would carry me off, as sometimes happens in the Alps. While I was standing thus, the wind blowing my jacket about behind, for I had no breeches on, my comrade Thomas saw me from afar but knew not what it was, for as he saw my coat blowing he thought it was a bird. When however he saw me plainly he grew pale with fright, and called out to me, 'Now, little Tommy, stand still!' and then he climbed up the little rock, took me by the arm and drew me up to where we could climb up to the goats."

Little Platter was shifted about to various masters, one, he says, "beat me terribly, and often lifted me by the ears from the ground"; and another "taught me absolutely nothing, and flogged me merci-

naires et de centenaires, avec de grandes barbes blanches: là ne s'approchait point la jeunesse, et les femmes n'osaient point y paraitre, l'âge et l'expérience seuls y géraient les affaires, et la jeunesse n'y comptait pour rien."

I have enquired for centenarians in the Valleys of Zermatt and Saas, but have not heard of one, or learnt that one has been known in recent times. In 1895 I asked M. le Curé of Grachen if he knew or had known of people in his parish who had attained such a patriarchal age, and he told me that he had buried a man of 96, six years before, who had taken part in the Russian campaign of Napoleon I, in 1812. Since then he had buried one of 93, and several of 80 to 84, but he thought that in 1895 there was no one living so old as 70.

The result of enquiry at St. Nicholas is mentioned at p. 109. At Zermatt, the oldest man in 1896 was aged 92. At Täsch (1896) oldest man was 87. Saw him returning from work carrying a hay-rake—apparently had been haymaking. At Randa (1896) there was a man and woman each aged 84. Saw the former carrying a basket of dung on his back. The oldest man at St. Nicholas was (in 1896) aged 86. It was said that there was a man (in 1896) at Emd over 90, and still working in the fields. At Stalden (in 1896) the oldest man was 84, and at Saas the oldest man was 83.

lessly." So that he began to wish to fly in the air, to "fly away over the mountains out of that country into Germany"; and at last he went away with a cousin to Lucerne, Zurich, Nuremberg and many other places, returning home from time to time to see his mother. After one of these visits, he says,

"I went away from the country again with two of my brothers. When we went to bid my mother farewell, she wept and said, 'God pity me, who have to see three of my sons go forth to misery.' That was the only time I ever saw my mother weep; for she was a brave, manly woman, but hard. When her third husband died she remained a widow and did all work like a man, so that she might the better bring up her youngest children. She hewed and threshed and did other work rather belonging to men than women. Three children also she buried with her own hands when they died in a terrible pestilence; for in the pestilence it costs much to employ a gravedigger. She was very hard towards us, her first children, so that we seldom came to her house. At one time, as I remember, I was not with her for five years, but wandered far in foreign parts. When I came to her, the first word she said to me was, 'Has the devil brought you here then?' 'No, mother,' I answered, 'the devil has not brought me here, but my feet. I shall not burden you long.' 'You don't burden me,' she said, 'only it vexes me that you go thus roving hither and thither, and doubtless are learning nothing. Learn to work as your father did. You will never be a priest. I am not so blessed as to be the mother of a priest.'"

St. Nicholas is suitable for persons who do not wish to spend much, and for those who prefer picturesque scenery or quiet to high mountain ascents or a crowd. The village has produced in the past a number of the best guides of the Zermatt district, and it is at the present time the home of capable men. During the season, however, they are seldom at home, and will more likely be found at Zermatt than at their own village. For names of **Guides of St. Nicholas** see Appendix G. The published **Tarif of Excursions** is given in Appendix A. It includes only a few of those above mentioned.

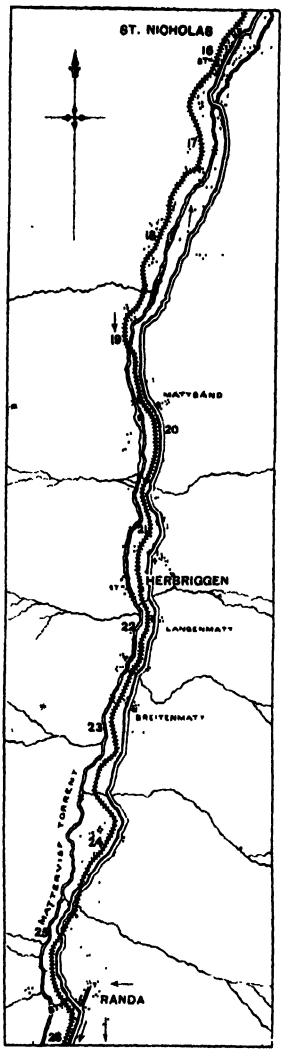
The Railway Fares from St. Nicholas are—

		Single Fares.		Return Tickets.	
		2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
		fr. cts.	fr. cts.	fr. cts.	fr. cts.
St. Nicholas to	Herbriggen	2. 70	1. 70	4. 80	3. 00
,,	Randa	4. 45	2. 80	8. 00	5. 00
,,	Täsch	6. 25	3. 90	11. 20	7. 00
,,	Zermatt	8. 90	5. 55	16. 00	10. 00
,,	Kalpetran	2. 70	1. 70	4. 80	3. 00
,,	Stalden	4. 00	2. 50	7. 20	4. 50
,,	Visp	7. 55	4. 75	13. 60	8. 50

The carriage-road to Zermatt begins at the southern end of St. Nicholas, and in 3 min. crosses to the right bank. There is a fine view looking *down* the valley between kils. 17-18. On the east side of the road hereabouts a former village of St. Nicholas is said to lie buried under a great rock-fall. The cluster of châlets at Mattsand, 4042 feet, 1232 mètres, is passed just before kil. 20, and a mile and

a quarter farther on one comes to Herbriggen. No inn here, nor anywhere on the road between St. Nicholas and Randa.

After leaving St. Nicholas, the railway continues for a time on the left bank, and between kils. 18-19 makes another steep ascent by means of the rack rails. At this part the views both up and down the valley are very striking. At the 19th kil. it crosses to the right bank, and runs closely alongside the road for a considerable distance. A brief halt only is made at



ST. NICHOLAS TO RANDA.

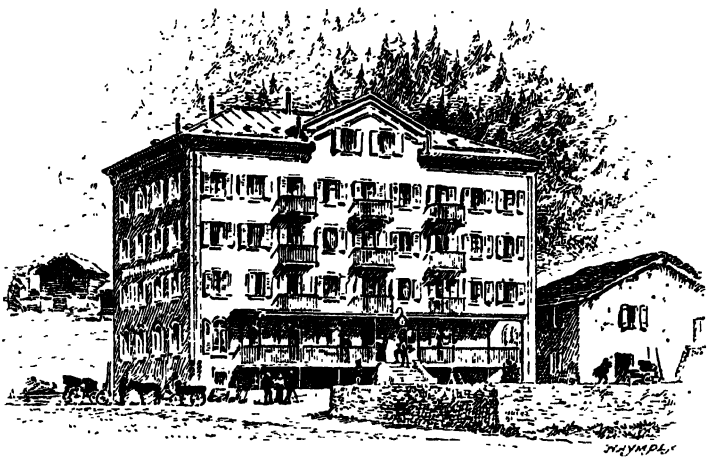
Herbriggen (Herbrigen), 4134 feet, 1260 mètres; 21·6 kils. from Visp, 13·4 kils. from Zermatt. This hamlet is situated on the right bank of the Mattervisp torrent, about a quarter of a mile from the Railway Station. Few people get in or out here. The Fares from Herbriggen are—

	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
St. Nicholas .	2. 70	1. 70	4. 80	3. —
Kalpetran .	4. 90	3. 05	8. 80	5. 50
Stalden . .	6. 70	4. 20	12. —	7. 50
Visp (Viège) .	9. 80	6. 10	17. 60	11. —
Randa . .	2. 25	1. 40	4. —	2. 50
Täsch . .	3. 50	2. 25	6. 40	4. —
Zermatt . .	6. 25	3. 90	11. 20	7.

The road from Herbriggen to Randa skirts lower slopes of the Mischabelhörner. The streams descending these slopes have often cut the road, and sometimes have interrupted the railway. At kil. 22 the hamlet of Langenmatt is passed, and that of Breitenmatt, 4186 feet, 1276 mètres, about half a mile farther on. Small chapel. Grand views here of the cliffs of the Brunnegghorn, and of the Bies Glacier descending between the Brunnegghorn and the Weisshorn, on the opposite side of the valley. The numerous châlets seen hereabouts are storehouses and are not tenanted, but afford convenient shelters in case of bad weather. Though passing close under the peaks of the Mischabel very little can be seen of the upper part of this fine range. There is another steep incline on the railway from kil. 23·7

to k. 24·7, alongside the road, where a pedestrian can amuse himself by *outwalking the train*. Half a mile farther on, upon turning a corner, one comes in sight of

Randa, 4741 feet, 1445 mètres; pop. 271; 25·7 kils. from Visp, 9.3 kils. from Zermatt. Post and Telegraph. **Hotels.**—HOTEL AND



HOTEL AND PENSION WEISSHORN, RANDA.

PENSION WEISSHORN (a little to the south of the village), and HOTEL DU DOM (close to the Railway Station). The Railway Fares are—

	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
Randa to Herbriggen . .	2. 25	1. 40	4. —	2. 50
,, St. Nicholas . .	4. 45	2. 80	8. —	5. —
,, Kalpetran . .	6. 70	4. 20	12. —	7. 50
,, Stalden . . .	8. 45	5. 30	15. 20	9. 50
,, Visp (Viège) . .	11. 55	7. 25	20. 80	13. —
,, Täsch . . .	1. 80	1. 15	3. 20	2. —
,, Zermatt. . .	4. 45	2. 80	8. —	5. —

For the **Guides of Randa** see Appendix G, and Appendix B for **Tarif of Excursions.** This 'tarif' by no means includes all the excursions that can be made. It addresses itself solely to those who are concerned with snow-peaks and passes. There are many minor excursions, suited to all sorts and conditions of persons; and, as both railway and road go in two directions, there is liberty of movement. The principal **ascents** made from Randa are those of the Weisshorn, the Dom, and the Täschhorn.

The Ascent of the Weisshorn, 14,803 feet, 4512 mètres, is the most considerable one to be made from Randa. This mountain is not so happily placed as the Matterhorn and other peaks which might be mentioned, and it cannot anywhere be seen to advantage *from a low level.* But from moderate and from the higher elevations it always appears a grand mountain. It can be seen well 3000 feet or so above Randa on the route to the Dom; or, more easily, from the Täsch Valley. "Of all mountain tops that I know, that of the Weisshorn is, I think, the most beautiful, with perhaps the one exception of the Wetterhorn. It is formed by three of those firm and delicate edges which can only be modelled in the mountain snow, uniting to meet in a mathematical point."—*Leslie Stephen.* The first ascent was made on Aug. 18-19, 1861, by the guides J. J. Bennen and Ulrich Wenger (an Oberlander) with Dr. John Tyndall.

The summit of the Weisshorn lies due W. of Randa, but it is not approached in a direct manner. The usual course when making an ascent is to round the Schallenberg (Schalliberg) towards the south and west, until about S.E. of the summit; then to go northwards, and strike the great eastern ridge of the mountain, and follow its *arête* to the top. This long eastern ridge is well seen from the Riffelberg, the Mettelhorn, and various other points. When a good way up it, "the *arête* narrowed," says Tyndall, "to a mere wall, which, however, as rock would present no serious difficulty. But upon the wall of rock is placed a second wall of snow, which dwindles to a knife-edge at the top. It is white and pure, of very fine grain, and a little moist. . . I had no idea of a human foot trusting itself upon so frail a support. Bennen's practical sagacity was, however, greater than mine. He tried the snow by squeezing it with his foot, and to my astonishment commenced to cross. Even after the pressure of his feet the space he had to stand on did not exceed a handbreadth. I followed him, exactly as a boy walking along a horizontal pole, with toes turned outwards. Right and left the precipices were appalling; but the sense of power on such occasions is exceedingly sweet. . .

. . We had been ten hours climbing from our bivouac to the summit, and it was now necessary that we should clear the mountain before the close of the day. . . We once fancied that the descent would be rapid, but it was far from it. . . Our muscles are sorely tried by the twisting round the splintered turrets of the *arête*, and we resolve to escape from it when we can: but a long, long stretch of the ridge must be passed before we dare to swerve from it. . . The face of the pyramid is here scarred by *couloirs*, of which the deeper and narrower ones are filled with ice, while the others are highways to the bottom of the mountain for the rocks quarried by the weather above. Steps must be cut in the ice. . . No word of warning was uttered here as we ascended, but now Bennen's admonitions were frequent and emphatic,—'Take care not to slip.' . . I imagined, however, that even if a man slipped he would be able to arrest his descent; but Bennen's response when I stated this opinion was very prompt, 'No! it would be utterly impossible. If it were snow you might do it, but it is pure ice, and if you fall you will lose your senses before you can use your axe.'

A deep and confused roar attracted our attention. From a point near the summit of the Weisshorn, a rock had been discharged; it plumped down a dry *couloir*, raising a cloud of dust at each bump against the mountain. A hundred similar ones were immediately in motion, while the spaces between the larger masses were filled by an innumerable flight of smaller stones. The clatter of this devil's cavalry was stunning. Black masses of rock emerged here and there from the cloud, and sped through the air like flying fiends. . . They whizzed and vibrated in their flight as if urged by wings. The clang of echoes resounded from side to side, from the Schallenberg to the Weisshorn and back, until finally the whole troop came to rest, after many a deep-

sounding thud in the snow, at the bottom of the mountain."—*Mountaineering in* 1861, by John Tyndall, 8vo, London, 1862.

The Randa **Tarif** for the Weisshorn is 80 frs. per guide and 45 frs. per porter. The route generally followed is substantially that which was taken on the first ascent. A *cabane* at 9380 feet, to the S.E. of the summit, near the place where Tyndall bivouacked, was long used as a sleeping-place for the Weisshorn. This hut became uninhabitable, and another was erected some distance higher up. It was inaugurated on July 9, 1900.

Ascents have been made from several other directions. From the Bies Glacier by the N.E. face, by Mr. J. H. Kitson, with Christian and Ulrich Almer, on Aug. 10-11, 1871 (see *Alpine Journal*, vol. v, p. 274). From the Schalliberg Glacier by the S. face and S.S.W. ridge, by Messrs. W. E. Davidson, Hartley, and Hoare, with Pollinger, Rubi, and Jaun, on Sept. 5-6, 1877 (*A. J.*, vol. viii, p. 419). From the W., by Mr. G. A. Passingham, with Ferdinand Imseng and Louis Zurbrücken, on Aug. 12-13, 1879 (*A. J.*, vol. ix, pp. 428-31). By the Schalliberg Glacier, *viâ* the Schallijoch, and the S.S.W. ridge, by Mr. E. A. Broome, with J.-M. Biener, and A. Imboden, on Sept. 1-2, 1895 (*A. J.*, vol. xviii, p. 145). Variations on these routes have also been made. By the North ridge, by Herr Biehly of Bern, with Heinrich Burgener, on Sept. 21, 1898 (*Jahrbuch des Schweizer Alpen Club*, vol. xxxiv, pp. 78-90).

In 1888, a young man of Munich, named Winkler, disappeared on the Weisshorn. He started from Zinal on Aug. 16 to attempt to climb it alone, and on the 29th his cap was found in the remains of an avalanche, which it is supposed had overwhelmed him.

On July 26, 1900, three Englishmen (Messrs. Brant, Cockin, and Corry) ascended the Weisshorn by the usual way, without guides. In descending, they left the ordinary route, and became benighted. The whole of the 27th was occupied in endeavouring to find a way down, but at nightfall they were still on the mountain. Mr. Cockin endeavoured to descend alone. The others remained where they were, and were succoured by a search-party early on the 28th. Mr. Cockin was found dead later in the day, and seems to have lost his life soon after parting from the others. See *A. J.*, vol. xx, pp. 255-9.

After the Weisshorn, the principal ascents to be made from Randa are those of the Dom and the Täschhorn.

The first ascent of the **Dom**, 14,941 feet, 4554 mètres, was made on Sept. 11, 1858, by the Rev. J. Llewelyn Davies, with Johann zum Taugwald (who had previously made some unsuccessful attempts on the mountain), J. Kronig, and Joseph Schwarzen of Randa. They left that village at 2.10 a.m., reached the summit at 11 a.m., returned to Randa at 4.20 p.m., and then walked up to Zermatt in time for the *table d'hôte*! The route that is now usually followed is marked on the Map of the Valley of Zermatt; and, so far as I can learn, does not differ much from that which was taken on the first ascent. It leads through the village of Randa, and then turns E., and mounts by the side of the Randaierbach, at first on the left bank, and afterwards by the right bank to the Festi *cabane*, 9400 feet, 2865 mètres. A night is commonly passed there, and the ascent effected on the following day. Time from Randa to Festi *cabane* 4½ hrs. Festi *cabane* to Randa 2 hrs. 5 min. There are magnificent views of the Weisshorn, 2000 to 3000 feet above Randa, from the path to the Festi *cabane*. The Dom is ascended frequently.

The Dom is the highest of the Mischabelhörner, and is the loftiest mountain that is completely in Switzerland; for, although the *summit* of Monte Rosa is Swiss, that mountain is partly in Italy. The Dom has also been ascended,—1. From the eastern side, *viâ* the Eggfluh and the Nadeljoch, by Rev. C. Taylor, Mr. R. Pendlebury, and Mr. G. E. Foster, with Hans Baumann and Gab. Spectenhauser, July 22-23, 1874 (*A. J.*, vol. vii, p. 105). 2. From the south, *viâ* the northern branch of the Kien Glacier and the Domjoch, by Messrs. Penhall and Conway, with F. Imseng and P. J. Truffer, Aug. 18-19,

1878. 3. From the west, partly by the Domjoch route, and then by the W. ridge of the mountain, by Dr. P. Güssfeldt, with Alex. Burgener and B. Venetz, July 27-8, 1882 (*A. J.*, vol. xi, p. 117). Several variations have been made on these routes. The Dom has been ascended in winter (Jan. 1894). Three days were occupied on this excursion (*A. J.*, vol. xvii, pp. 67, 384, etc.).

A direct ascent of the Dom from Saas is not to be recommended. Mr. Mich. Carteighe, who went that way in 1885, says, "Having heard on all sides that falling stones and ice usually enliven all expeditions in the Mischabel range undertaken on the Saas side, we decided to start early. . . Our progress was barred by an inverted pyramid of stones perched on the face. This could not be turned, and it was obviously necessary to pass over with caution. Accordingly Gabriel (Taugwalder) went over first with about 60 feet of rope that he might 'prospect.' Imseng was roped next, and was on one side of the pyramid, while I was last and lower down on the other side of the stones. When the rope was tight between Gabriel and Imseng[1] the latter began to move. Instead of crawling in a loving manner over the group, he thoughtlessly made a spring, seized a large boulder-shaped stone, which he pulled upon himself, and then, turning head over heels backwards, freed himself from the stone and regained his foothold, the rope being 'ganz fest.' The stone then bounded over to the right towards me. I managed to avoid a direct collision, but one end caught me on the mouth and jaw, removing, as the dentists say, two teeth, and then as the stone rebounded to the left, the opposite end struck the palm of my left hand, gashed up the flesh, and then sped its way down to the glacier below."—*A. J.*, vol. xv, p. 102.[2]

The **Täschhorn**, 14,757 feet, 4498 mètres, is the second highest of the Mischabelhörner. It was first ascended by the Rev. J. Llewelyn Davies and the late Rev. J. H. Hayward, with the brothers Johann and Stephan zum Taugwald,[3] on July 31, 1862. No account of this expedition has been preserved, and I am unable to say whether the original route is that which is now taken. The latter is marked on the Map of the Valley of Zermatt. After leaving the Hotel at Randa, it leads diagonally across the Tschuggen Alp towards the Kien Glacier. At about 9180 feet, there is a sleeping-place, 3½ hs. above Randa.

Several other ways have been found up the mountain. 1. From Saas-Fée, at first by the Mischabeljoch route and subsequently up the E. face of the mountain [Mr. P. Watson and Rev. F. T. Wethered, with Alex. Burgener, B. Venetz, and L. Proment, Aug. 7, 1876.—*A. J.*, vol. viii, p. 108]. 2. From the top of the Mischabeljoch, *viâ* the S.E. ridge of the peak [Mr. J. Jackson, with Christian and Ulrich Almer, Aug. 15, 1876.—*A. J.*, vol. viii, pp. 345-6]. 3. From the N., *viâ* the Domjoch [Mr. F. Cullinan and the Hon. Gerald Fitz Gerald, with Peter Knubel and Joseph Moser, Sept. 1-2, 1878.—*A. J.*, vol. ix, pp. 109-110]. 4. By the W.S.W. ridge. See *My Climbs in the Alps and Caucasus*, by A. F. Mummery, London, 1895.

In 1893, a fatal accident occurred on the lower slopes of the Täschhorn, not far from Randa. On Aug. 15, Messrs. Williamson and Lucas (the latter an Oxford undergraduate) passed the night on some rocks on the east side of the peak, and at 11 a.m. on the next day reached the summit, intending to arrive that night at Randa. At 10 p.m. they had not got clear of the forest below the Kien Glacier! and as "the guides considered that it would be unwise to attempt to descend further, as their lanterns were burnt out, they selected a smooth piece of grass on which to pass the night." One of the guides awoke about 1 a.m., and missed Mr. Lucas; and at 4 a.m. he was found dead a short distance away, at the foot of a rock 60 mètres in height. His watch had stopped at 12.20. See *Alpine Journal*, vol. xvi, p. 503, and vol. xvii, pp. 39-40. The guides were Adolph Andenmatten (of Almagell) and Franz Zurbriggen (of Saas).

[1] Xavier Imseng (Saas-Fée). See my *Guide to Chamonix*, p. 64, for the death of Imseng.

[2] It may be well to point out that several fatal or very serious accidents have occurred in recent years in this district through *guides* dislodging stones or boulders. Both ascending and descending, it is impossible to exercise too much caution to avoid dislodging rocks when anyone is *below*.

[3] Stephan zum Taugwald became Curé of Täsch.

Both Dom and Täschhorn have of late years, on more than one occasion, been ascended by the same party within the compass of a long day; and, in 1895, Mr. W. E. Davidson, with Christian Klucker and Daniel Maquignaz, starting from above Saas-Fée, ascended the Täschhorn from the Mischabeljoch, crossed over the summit and descended on the Domjoch, thence ascended the Dom and descended on its northern side, reaching Randa the same evening.

The Randa **Tarif** for the Täschhorn is the same as for the Dom.

The other peaks included in the Randa *Tarif* are the Bieshorn, Dürrenhorn, Hohberghorn, and Süd-Lenzspitze. The **Bieshorn** is the peak to the N. of

of the Nadelhorn, and can be got at *viâ* a little valley running E. from Breitenmatt. The **Hohberghorn** is the peak 4226, to the N.W. of the Nadelhorn. It can be ascended by more than one route. The **Süd-Lenzspitze** is the point 4300, to the S.E. of the Nadelhorn. Upon more than one occasion the three peaks Süd-Lenzspitze, Nadelhorn, and Ulrichshorn have been ascended in one day.[1] There are, besides, several other ascents which can be made from Randa that are not on the *Tarif;* namely, the **Nadelhorn** (the highest point of the Saas Grat N. of the Dom), the **Galenhorn, Grabenhorn, Strahlbett or Kienhorn** (12,320 feet, 3755 mètres, W.S.W. of the Täschhorn), and **Leiterspitz.** The **Mettelhorn,** also, can be ascended from Randa in a day. For the elevations and positions of these peaks see Appendix E.

There are several lofty and fine **Passes from Randa** over the Saas Grat to Saas-Fée, which have, however, small claim to practical utility, or to the attention of the general public, and they are mostly ignored by the *Tarif;* namely, the **Mischabeljoch, Domjoch, Nadeljoch, Lenzjoch** (between the Süd-Lenzspitze and the Nadelhorn), and **Hohbergpass.** On the Western side of the valley, the **Biesjoch** leads to the Turtmann Thal, and the **Schallijoch** to Zinal. For positions and elevations of these Passes see Appendix F.

The **road from Randa to Zermatt** runs closely alongside the railway for ¾ mile, and at this part there are especially good views of the Breithorn and Petit Mont Cervin (right in front). The prominent mountain on the right is the Mettelhorn. After passing the hamlet Wildi (small chapel) there are few houses against the road, which in about 40 min. arrives at—

Täsch (Taesch or Tæsch), 4777 feet, 1456 mètres; pop. 251; 29½ kils. from Visp, 5½ kils. from Zermatt. HOTEL DU TAESCHHORN, close to the Station. The village is situated on the right bank of the Mattervisp torrent, about a quarter of a mile from the Railway. The Fares are—

	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
Täsch to Randa	1. 80	1. 15	3. 50	2. —
,, Herbriggen . . .	3. 55	2. 25	6. 40	4. —
,, St. Nicholas . . .	6. 25	3. 90	11. 20	7. —
,, Kalpetran . . .	8. 45	5. 30	15. 20	9. 50
,, Stalden	10. 25	6. 40	18. 40	11. 50
,, Visp (Viège) . . .	13. 35	8. 35	24. —	15. —
,, Zermatt	2. 70	1. 70	4. 80	3. —

[1] It is possible to go along the top of the entire range of the Saas Grat without descending to the valleys at all. The directions are simple. Commencing at the Schwarzberg Weissthor, go over the summit of the Strahlhorn and descend on the Adler Pass; then go over the Rimpfischhorn and come down on the Allalin Pass; next walk up the Allalinhorn and descend to the Alphubeljoch, whence you cross over the

The torrent (Täschbach) from the Täsch Valley flows through Täsch, and is now embanked. It was formerly a source of trouble, and frequently rendered the road to Zermatt nearly or quite impassable. In the village itself there is little to be seen except the collection of skulls and bones which is preserved in a small building (*beinhaus*) attached to the Church. At Täsch, and various other places, they do not allow one to remain peaceably in his grave in perpetuity. You are disinterred and your bones are stacked away in this fashion. There are similar collections at St. Nicholas and at Visp. For names of **Guides** of Täsch see Appendix G.



CHARNEL-HOUSE ('BEINHAUS') AT TÄSCH.

[From the village of Täsch, a good path starts at the upper bridge over the Täschbach for the **Täsch Alp.** The name Täsch Alp is sometimes applied to a small **Inn** situated in a valley which leads at first a little S. of E. and afterwards about S.E., and sometimes to the *Valley itself.* In this volume the valley is called the Täsch Valley, and the ground round about the inn is termed the Täsch Alp.

The path gets into forest soon after leaving the bridge, and is steep for about 1500 feet. When it begins to enter the Täsch Valley the inclination becomes moderate, and it so continues to the Inn (about 7000 feet) which can

Alphubel to the Mischabeljoch, and go successively over the Täschhorn, Dom, Süd-Lenzspitze, Nadelhorn, Ulrichshorn and Balfrin. The whole route has been traversed in sections upon one or another occasion.

be reached easily in 1 h. 50 min. from Täsch. This inn is now often used as a starting-point for the ascents of the Allalinhorn, Alphubel, and Rimpfischhorn, and for the passages of the Mischabeljoch, Alphubeljoch, Fée joch, Allalinpass, etc. It is sometimes closed early in the season, and enquiry



should be made before leaving Täsch, to avoid disappointment. In the event of the Täsch Alp inn being closed, Randa can be used as a starting-point for these excursions. It is nearer than Zermatt.

A promenade on foot or mule-back can be taken by anyone, alone, to the foot of the Mellichen, Hubel, and Langenfluh Glaciers at the head of the Täsch Valley (about 8000 feet). They can be reached in a leisurely fashion in 1¼ to 1½ hs. Fair path. This is good grazing-ground, and there are often many cattle about, some of whom are uncivilized. Carry a stick. Admirable views of the Weisshorn will be seen in front, when returning.

The first ascent of the **Allalinhorn**, 13,235 feet, 4034 mètres, was made on Aug. 28, 1856, by Mr. E. L. Ames, with the guides Franz Andermatten and — Imseng of Saas. They started from the Mattmark Inn, and after getting to the top of the Allalinpass followed the ridge which leads thence N.E. by N. to the summit of the mountain. The ascent from the Col and back occupied them about 4 hs. From the Col they descended to Zermatt, *viâ* Täsch. From place to place 14 hs. were taken. The mountain was crossed from N. to S. (Saas to Zermatt) by Sir Leslie Stephen and Rev. W. Short, with Franz Andermatten and Moritz Anthonmatten (?) on Aug. 1, 1860. Sixteen hours were occupied from place to place.

The **Alphubel**, 13,803 feet, 4207 mètres, was first ascended on Aug. 9, 1860, by Sir Leslie Stephen, *viâ* the Täsch Valley. No account of this ascent has been preserved, and I am unable to indicate the route that was taken. The summit can be attained in 1½ hs. from the Alphubeljoch, and in even less time from the Mischabeljoch, and it is also accessible from the West.

The first ascent of the **Rimpfischhorn**, 13,790 ft., 4203 mètres, was made by Dr. R. Liveing and Sir Leslie Stephen in Sept. 1859, with the guides Melchior Anderegg and Johann zum Taugwald, from Zermatt, *viâ* the long ridge called the Rimpfischwänge. Twelve hours of actual going seem to have been occupied on the ascent and descent. This mountain has also been ascended from the Allalinpass (5 hs. from the Pass to the top), but the route which is probably the shortest and easiest is that marked on the Map of the Valley of Zermatt, from the Täsch Valley, crossing the Hubel Glacier near its foot, mounting the buttress between it and the Langenfluh Glacier, and crossing the latter to a point high up on the Rimpfischwänge, which is then followed to the summit. The Rimpfischhorn is a more appetizing morsel for a mountaineer than the Allalin and Alphubel, which also, as points of view, are inferior to a number of positions in this district that can be gained more easily.

The passes out of the Täsch Valley, leading to the Saas Thal, are all moderately easy; though, as they are lofty, they are, under any circumstances, somewhat laborious. The **Mischabeljoch**, 12,651 feet, 3856 mètres, between the Täschhorn and the Alphubel, was first traversed by Messrs. Coutts and William Trotter, the Rev. H. B. George and the Rev. W. S. Thomason, with the guides Peter Bohren, Christian Almer, and two Saas men, on July 30, 1862, from Saas (im Grund) to Zermatt. Fifteen hours were taken going right through. The route now usually followed for this pass is marked on the Map of the Valley of Zermatt.

The **Alphubeljoch**, 12,474 feet, 3802 mètres, between the Alphubel and Allalinhorn is easy; but with new snow may be very laborious. The ordinary route for it is marked. Time from Saas-Fée to Täsch Alp in 9 to 10 hs., actual going. In 1889, a French lady and gentleman fell, "*with their guide*, into a crevasse on this pass, and were only saved by the arrival of another party."—*Alpine Journal*, vol. xiv, p. 475.

The **Fée joch**, 12,507 feet, 3812 mètres, is not shown upon the Map of the Valley of Zermatt. It lies between the point marked 3912 and the Allalinhorn. That peak can be ascended from the Col. It is a circuitous route from the Täsch Valley to Saas-Fée; but, being easy, is as quick as the more direct ones.

The **Allalinpass**, the next one to the south, 11,713 feet, 3570 mètres, between the Allalinhorn and Rimpfischhorn, is known to have been crossed in 1847, and possibly was in use long before. This is

a very circuitous way of getting from the Täsch Valley to Saas, but the time occupied is not more than upon the above-mentioned passes. Deducting the 4 hs. taken on the first ascent of the Allalin from the Col to the Summit and back, Mr. Ames' party went through from Mattmark to Zermatt in 10 hs.

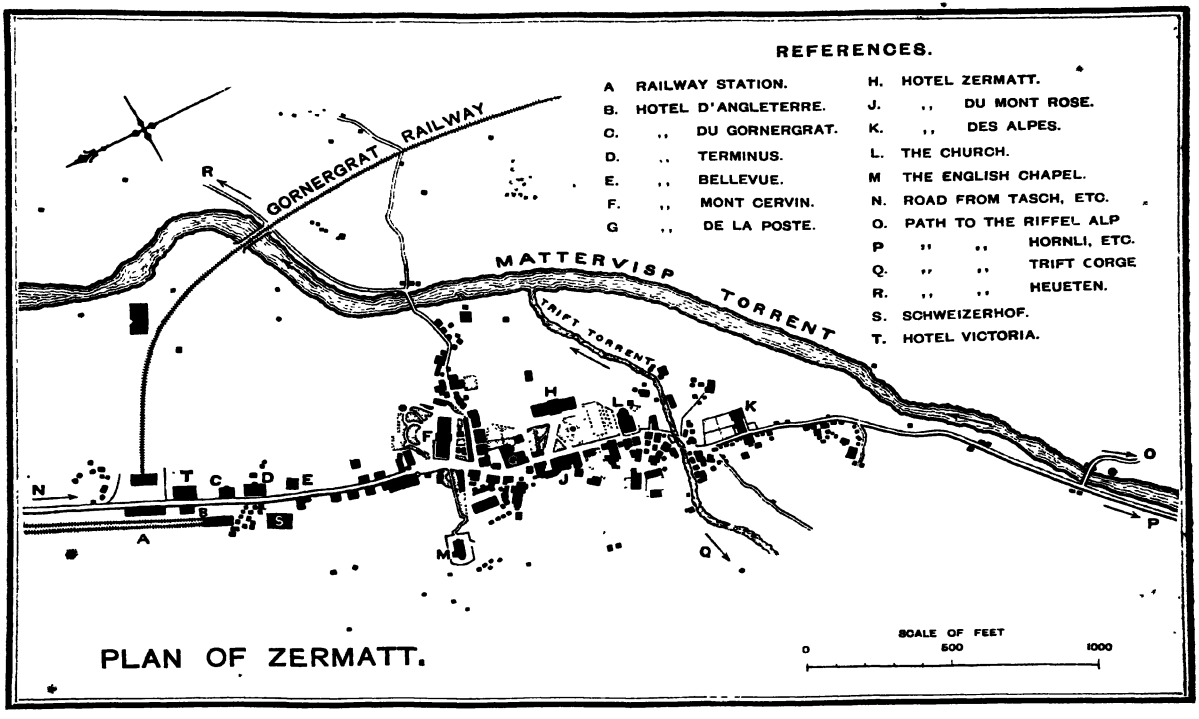
There remains to be mentioned a little pass at the head of the Täsch Valley, the **Langenfluh Pass**, leading from it into the Findelen Valley, across the western end of the long ridge called the Rimpfischwänge. This has not yet been recognized on the Official Maps of Switzerland. It goes between the points marked 3258 and 3314, by the track laid down on the Valley of Zermatt Map, and is, approximately, 10,500 feet high. One can get by it easily in 5 to 6 hs. from the Täsch Alp Inn to the Fluhberg Hotel (by the side of the Findelen Glacier).

In descending from the Täsch Valley with the intention of proceeding to Zermatt, the *quickest* way is to return by the path to the village of Täsch, and thence by train. If *time* is not an object, another way may be taken. When about 20 min. down, a rough path will be noticed leading away to the left (about S.S.W.) by the side of an old, disused watercourse. Baedeker's *Switzerland* terms this "a direct but disagreeable forest-path." I have found it very serpentine and highly agreeable.]

South of Täsch, the **road** to Zermatt does not rise much for 3 kils. Just before it crosses to the left bank of the Mattervisp (5023 feet, 1531 mètres), there is the RESTAURANT ZUM BIEL, by the roadside. After crossing the stream, it steepens on the next two kilomètres, but the last bit, just before entering Zermatt, is flat.

A kilomètre and a half to the south of Täsch, the **railway** crosses to the left bank for the last time, and rises rapidly, in 1 kil., high above the torrent and road, by the last of the inclines with rack rails. At this part it skirts the base of the Mettelhorn. There is a grand view, between kils. 31-32, of a gorge through which the Mattervisp runs. Get on the side of the stream. The **Matterhorn** first shews itself, to those in the train, about the 34th kil., and after passing through a little tunnel Zermatt comes in sight, with Mont Cervin towering above. At the Terminus there is a good Buffet, and Omnibuses from the Hotels will be found in the Station Yard. The Railway Fares from Zermatt are—

	Single Fares.		Return Tickets.	
	2nd Cl.	3rd Cl.	2nd Cl.	3rd Cl.
	fr. cts.	fr. cts.	fr. cts.	fr. cts.
Zermatt to Täsch . .	2. 70	1. 70	4. 80	3. —
,, Randa . .	4. 45	2. 80	8. —	5. —
,, Horbriggen .	6. 25	3. 90	11. 20	7. —
,, St. Nicholas .	8. 90	5. 55	16. —	10. —
,, Kalpetran .	11. 15	6. 95	20. —	12. 50
,, Staldon . .	12. 45	7. 80	22. 40	14. —
,, Visp (Viège) .	16. —	10. —	28. 80	18. —
,, Lausanne. .	26. —	17. 15	44. 80	29. 40



PLAN OF ZERMATT.

CHAPTER VIII.

UPON THE VILLAGE OF ZERMATT.

ZERMATT ITS POPULATION—AUTHORITIES—REPARATION OF PATHS—COMMUNAL FORESTS—HOTELS—THE STREET—SHOPS—MANNERS AND CUSTOMS—THE CHURCH—INSCRIPTIONS IN GRAVEYARD—ENGLISH CHURCH AND INSCRIPTIONS IN ITS GRAVEYARD—AN ALPINE GARDEN!—ZOOLOGICAL GARDENS—POST OFFICE—TEMPERATURES—GLACIERS—EARTHQUAKES—BRIDGES—GUIDES AND MULES—THE GORNERGRAT RAILWAY.

THE **Village of Zermatt**,[1] 35 kils. from Visp, is situated in a basin at the head of the Nicolai Thal, upon nearly level ground, on the left bank of the Mattervisp torrent. It is in the *District de Viège* (or *Bezirk Visp*). See p. 101. **Altitude**, 5315 feet (1620 mètres). Post, Telegraph, and Telephone.

The resident **Population** at the last Census was 741, and it is increasing. During the season, the residents are largely augmented by the persons employed in the Hotels, and by shopkeepers and others who come from various parts of Switzerland. For Zermatters in early times, see p. 9. The **Authorities** comprise the President of the Commune (with a Council of five), a *Juge*, and *sous-Juge de Commune*.

The whole of the upper parts of the surrounding *Alps* and mountains, up to the limits of pasturage, are the property of the Commune. On the lower ground, many little patches and plots are private property. The Zermatters set a high value on their **land**, and ask prices equivalent to those which are obtainable in the City of London. The Commune derives a considerable revenue from rents.

Reparation of Roads and Paths.—The Commune determines what shall be done in this matter, and assesses the amount that shall be contributed by each person, according to his means. An Association has been formed called *la Société pour le développement de Zermatt*, which takes into consideration, amongst other matters, improvement of the paths.

Forests.—Although the Forests around Zermatt (in consequence of the high average elevation of the soil) are not so extensive as those belonging to some of the Communes lower down the Valley, they

[1] The name Zermatt is of comparatively modern origin. See chap. i. I have remarked the following variations in spelling. Zermatten (Bourrit, 1781); Zer-Matt (De Saussure, 1796); Zur-Matt (Ebel, 1804); Zermat (Schiner, 1812); Matt (Ebel, 1818); and Zurmatt (Marc Viridet, 1833).

form a large and valuable property. Every member of the Commune has right to wood to build a house, if he has not already got one, but he has to pay for its transport.

The most picturesque tree in this neighbourhood is the Arolla Pine, and it is also one of the most serviceable for its timber, but it is not considered so valuable as the Larch. The greater part of the châlets are built of the latter wood. Furniture and floors are made from the Arolla Pine.

Hotels.—GRAND HOTEL DU MONT CERVIN (300 beds; Pension, 7-16 francs; *Bierhalle;* Lift). HOTEL MONTE ROSA (100 beds; Pension, 7-14 frs.). HOTEL ZERMATT (180 beds; Pension, 7-15 frs.). These are the three largest and oldest established Hotels (see pp. 15, 17). They are all central, and are favourites with English and Americans.

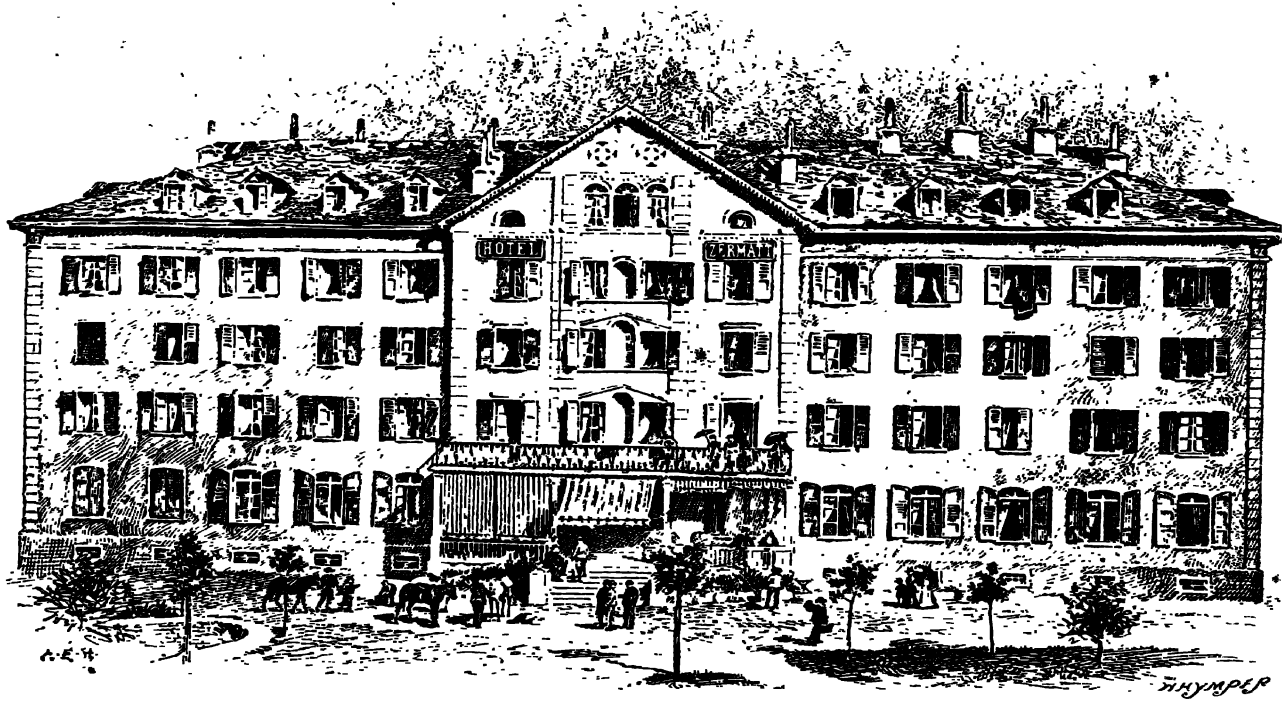
Pension includes '*déjeuner du matin*' (*café, thé, ou chocolat complet*), '*déjeuner à la fourchette*' (lunch), dinner, rooms, and attendance. It must be for a week, at least, reckoning from the day the arrangement is made. For a supplementary payment of 50 centimes per head, pensionnaires in the three above (Seiler) hotels at Zermatt can lunch at the RIFFELALP HOTEL, at the RIFFELBERG HOTEL (RIFFELHAUS), or at the LAC NOIR (SCHWARZSEE). At all these six establishments the price of *Pension* is reduced *until* July 1, and *after* September 1.

HOTEL GORNERGRAT; GRAND HOTEL TERMINUS; HOTEL D'ANGLETERRE; HOTEL SCHWEIZERHOF; HOTEL BELLEVUE; GRAND HOTEL VICTORIA. These are near the Railway Station. HOTEL DE LA POSTE (central). HOTEL-PENSION BON REPOS; PENSION-RESTAURANT ALPENROSE; DEPENDANCE & PENSION PERRN (the two latter are on the right bank of the Mattervisp). There are also two other hotels a short distance from Zermatt, close to the Chapel of Heueten (see p. 142), called WALDESRUHE, and Hotel MORGENROTH; and another one a little to the south of the village, named RESTAURANT DES ALPES. Most of the Hotels have the Electric Light; and omnibuses from them leave for the Railway Station before the departure of each train. *The Trains start punctually.*

In the Street.—Zermatt has one street, which runs through the whole length of the village. The side alleys and lanes leading off it are *not* recommended. The **Shops** are in 'the street,' and include one kept by a son of the renowned guide **Melchior Anderegg**, for the sale of Carvings, Photographs, etc. There are a dozen or more general shops, a Baker, Bank, several Bootmakers, Confectioner, Doctor, Florist and Fruiterer, Forwarding Agents, Lady Barber (**Marie Biner**), and a Jeweller. J. Lauber deals in minerals. At the general shops, bread, cheese, tobacco and tourists' requisites are sold. 'Long John,' Liebig's Extract, Chlorodyne, Photo. Chemicals, English specialities in general, and Medicines prepared according to the British Pharmacopœia, can be obtained at the Chemist's (**J. M. de Chastonay**), in the Villa Margueritha, near the Hotel Mont Cervin.

Manners and customs at Zermatt.—The *Journal de Zermatt*, Aug. 18, 1895, contained the following paragraph.—

'**Mœurs et coutumes de Zermatt.**—On connait les beautés de la contrée, mais on ignore les mœurs du pays. Par exemple, sait-on qu'à Zermatt il n'a



THE HOTEL ZERMATT IN 1895.

jamais été constaté de délit, vol ou rixe. Le casier judiciaire de la contrée est immaculé. Les magasins n'ont pas de volet, les étalages restent dehors la nuit, les portes des châlets n'ont pas de serrure; il arrive souvent que des étrangers, inconnus des négociants, emportent, manquant de monnaie, des marchandises qu'ils viennent religieusement solder le lendemain; le cas contraire, de mémoire d'homme, ne s'est jamais produit. Les guides jouissent d'une réputation de probité sans tache; nombre de touristes leur confient les fonds dont ils sont porteurs et il ne s'est jamais élevé même de contestation. Détail typique, le banquier du pays dort avec la fenêtre ouverte. A minuit, dans tous les cafés de Zermatt, l'obscurité se fait, par suite de l'extinction de la lumière électrique et chacun se retire, sans murmurer. Le seul gendarme du village semble plutôt préposé à la surveillance de la vertu qu'à la répression du vice."



ZERMATT CHURCH.

Zermatt Church, dedicated to St. Maurice, is a plain structure externally, and is less ornate internally than most of the churches in this district. Admission can be had at all reasonable times. According to Ruden's *Familien-Statistik*, it is not known when it was erected. The sacristy is dated 1587, and stands, it is said, on the site of a charnel-house (*beinhaus*). On Sundays, First Mass at 5.30 a.m.; Second Mass, 7 a.m.; Third Mass, 8 a.m.; High Mass, 9 a.m. On week-days, Mass at 6.30 and 7.30 a.m. The **parsonage** is on the S.E. side of the Church, and is the house where visitors lodged before the first Hotel was opened. See p. 14. The **Parish of Zermatt** extends on the S. up to the Italian frontier, and on the N. is bounded by the Parish of Täsch. Like all the rest of the Valley, it is in the Diocese of Sion.

In the centre of the **Churchyard**, on the S. side of the Church, there is the monument to Michel Croz (see p. 71), bearing this inscription, on the side facing the street.—

"à la memoire de Michel Auguste Croz né au Tour vallée de Chamounix, en temoignage de regrets de la perte d'un homme brave et dévoué, aimé de ses compagnons estimé de voyageurs, il périt non loin d'ici en homme de cœur et guide fidèle."

Upon the N. and S. sides respectively of the monument there are the dates of his birth and death [Avril 22me, 1830; Juillet 14me, 1865].

On the north of the Church there are the graves of the Rev.

Charles Hudson and Mr. Hadow (see p. 70), and at their side there is that of Mr. W. K. Wilson of Rugby School, with these inscriptions.—

"Douglas Robert, eldest son of Patrick Douglas and Emma Hadow, who perished in descending the Matterhorn, July 14, 1865, aged 19 years. Even so Father, for so it seemed good in thy sight. S. Matt. xi.—26.

"Charles Hudson, Vicar of Skillington, Lincolnshire, killed in descending the Matterhorn, July 14, 1865, aged 36 years. Be ye therefore also ready. S. Luke xii. 40."

" + William Knyvet Wilson, M.A. Fellow of Trin. Coll. Cambridge. + Born Nov. 2. 1838. + Killed by a fall on the Riffelhorn, July 18. 1865. + "It is I be not afraid." St. John vi. 10."

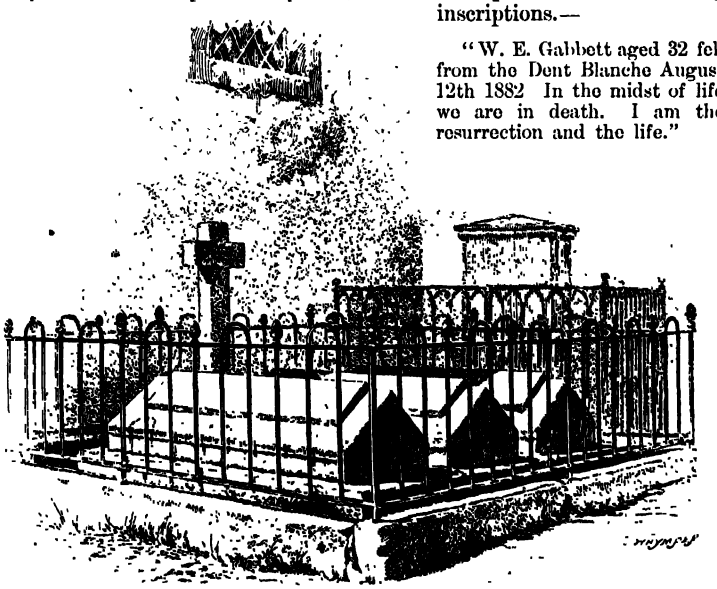
By their side there is the tomb of Mr. E. von Grote, inscribed "Eduard von Grote xiii August MDCCCLIX semper idem" and close by there is the grave of Mr. Goehrs (see p. 86), bearing this inscription.—

"Edouard Goehrs né a Strassbourg le 23 Oktober 1863 Mort au Cervin le 11 September 1890 Mes pensées ne sont pas vos pensées et mes voies ne sont pas vos Voies a dit l'Eternel. E.S.S.S."

And alongside there is the grave of Mr. Chester (see chap. x) inscribed "Henry Chester of Poyle Surrey who died on the Lyskamm."

The English Church is placed upon an eminence opposite to the Hotel du Mont Cervin. The keys are kept at the Hotel du Mont Rose. Upon its S. side there are the graves of Mr. Gabbett (see chap. ix), Mr. Borckhardt (see pp. 85-6), Messrs. Lewis and Paterson (see chap. x), Miss Sampson (see p. 164), and Mr. Cooper, with the following inscriptions.—

"W. E. Gabbett aged 32 fell from the Dent Blanche August 12th 1882 In the midst of life we are in death. I am the resurrection and the life."



THE GRAVES OF HUDSON, HADOW, AND WILSON.

"In memory of Frederick C. Borckhardt St. Albans, Herts who perished on the Matterhorn during a terrible snowstorm, 18 August 1886 Aged 48."

"In loving memory of my beloved husband William Arnold Lewis barrister at law of the Inner Temple and 29 Elsham Road Kensington son of the late W. D. Lewis Q.C. who lost his life on September 6TH 1877 by a fall from the Lyskamm Aged 30. Thy will be done."

"At rest "Until the Day Break" Noel H. Paterson Aged 33 Sept 6th 1877

"In Memory of Ellen Emma Sampson, of Hendon, Middlesex, killed by falling stones on the Triftjock 30th August 1895."

"To the beloved, abiding memory of James Robert Cooper, of Durdans, Reigate, Surrey; (aged 79) who was lost on Midsummer Day, 1897, and found in the Wittiwald on Oct. 25th of the same year, beneath the Shadow of a Rock, as if sleeping.

—'I will seek that which was lost . . . and they shall dwell safely in the wilderness and sleep in the woods.'"

By the side of the last there is the grave of Mr. Cockin. See p. 119.

In front of the English Church there is an **Alpine Garden** in the centre of which is a monument to Alexandre Seiler I, and his wife, that was erected by public subscription in 1902; and also the **Musée de Zermatt**, containing numerous objects of local interest, rocks, minerals, etc.; photographs of mountaineers and mountain scenery.

[A list of **Plants** that are found in the neighbourhood of Zermatt is given at the end of Ruden's *Familien-Statistik*, embracing more than 500 species. The following *genera* are amongst those which are most strongly represented. *Anemone* (6), *Arenaria* (8), *Artemisia* (7), *Campanula* (8), *Carex* (23), *Cerastium* (6), *Draba* (7), *Gentiana* (13), *Geranium* (4), *Gnaphalium* (5), *Hieracium* (19), *Myosotis* (4), *Potentilla* (14), *Ranunculus* (9), *Saxifraga* (14), *Silene* (5), *Trifolium* (9), *Veronica* (9), *Viola* (7).

Digging up plants by their roots.—The following notification was printed in the *Journal de Zermatt*, Aug. 11, 1895.

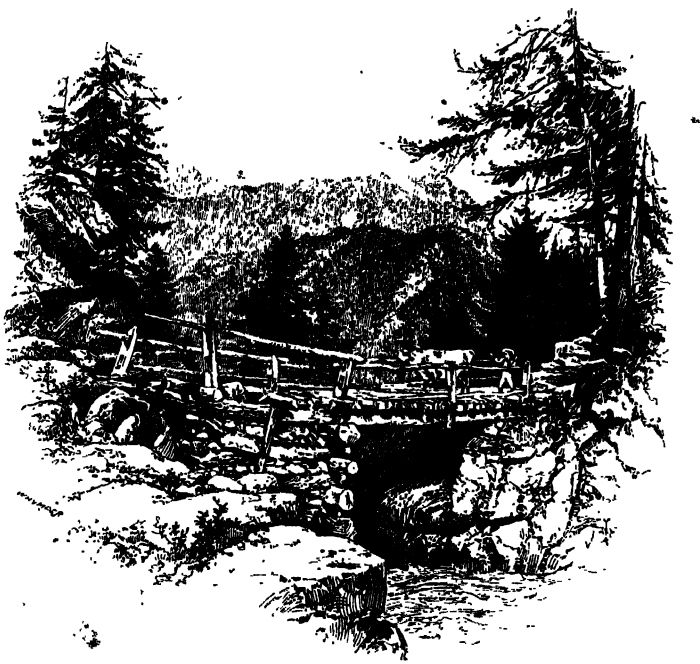
"**Expéditions de fleurs avec leurs racines.**—Pour arracher et expédier des fleurs destinées à être transplantées, une autorisation du maire de Zermatt, M. Pierre-Louis Perren, est indispensable. De plus ces fleurs devront acquitter un droit municipal de 5 fr. le kilo pour les edelweiss et 3 fr. pour les autres fleurs."

It is impossible to collect the tax, and the 'indispensable authorisation' is, I think, very generally ignored.]

Interesting Birds in the neighbourhood of Zermatt.—To the *Zoologist* for 1898, pp. 474-6, Dr. P. L. Sclater, F.R.S., contributes some observations upon birds which can be seen in the neighbourhood of Zermatt, "not to be seen in life in the British Islands, and of special interest to the student of European ornithology." "You cannot," he says, "go very far into the pine forest adjoining the Riffel Hotel without meeting with the Nutcracker . . . certainly the most characteristic bird of the higher forests in Switzerland"; and he mentions having seen upon the Riffelalp, or round about the Hotel, the Alpine Accentor, Snow-finch, Water Pipit, and Black Redstart. The Alpine Chough inhabits the steep cliff between the Riffelalp Hotel and the Riffelhaus, and "there is a large colony of them on the Gornergrat, where they inhabit the southern face of the steep rocks overlooking the Gorner Glacier." "There are at least

six most interesting Alpine birds to be met with on the Riffelalp. . . . I have no doubt that all these species would be found breeding there in the spring."

The **Gardens** of the Mont Cervin Hotel, close at hand, are **Zoological** in their tendencies, and contain Marmots, Bouquetin, etc. The **Post Office** is open on week-days from 7 a.m. to 8 p.m., and on Sundays from 8 to 10 a.m. and 1—3 p.m. **Telegraph Office** is always open. For **the Swiss Post** see p. iv of Introduction.



THE MATTERHORN BRIDGE.

Temperature.—The *maximum* temperature in the shade at Zermatt is seldom higher than 24° C. (75°·2 Fah.). The highest recorded temperature in recent years occurred, I believe, on Aug. 16-17, 1892, when the thermometer rose to 76°·1 Fah. In the sun, however, the heat (both on high and low ground) is often sufficient to make one wish for shade, and an umbrella is not to be despised. In Winter, the *minimum* may be as low as −6° Fah. (38° below freezing-point).

Glaciers.—In the Report on the periodical variations of glaciers in the *Jahrbuch* of the Swiss Alpine Club, 1900, it is stated that in the years 1897-9 the Gorner, Findelen and Zmutt glaciers all shewed shrinkage. The Findelen, however, in 1894, *advanced* 60 mètres.

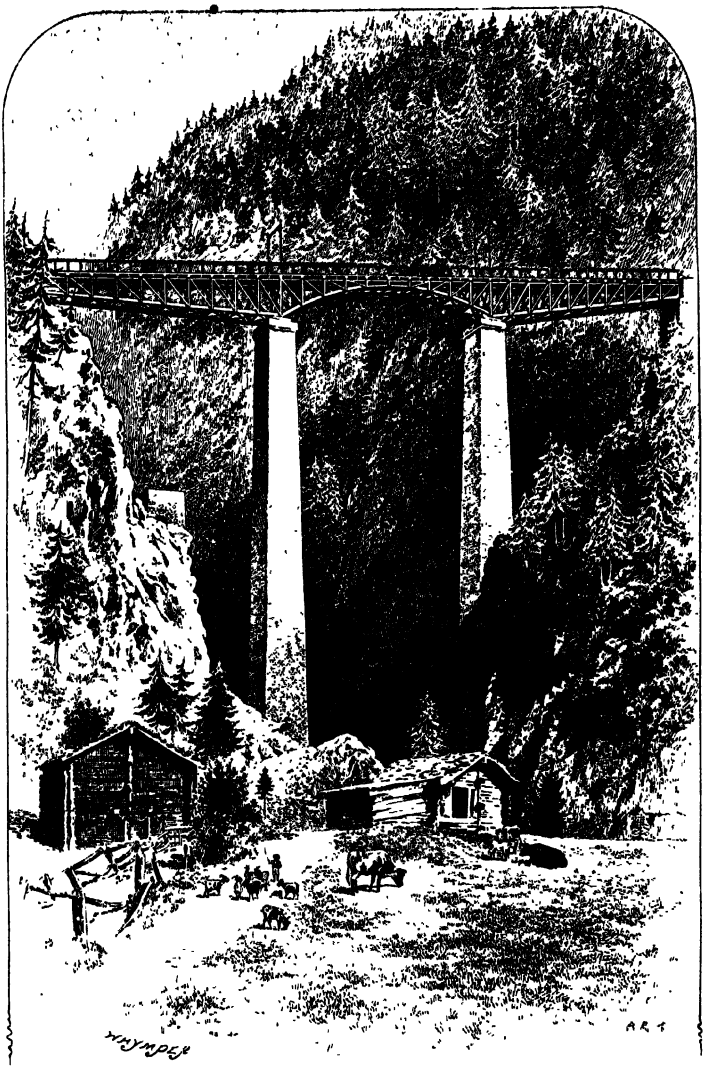
Earthquakes.—The Nicolai Thal experienced earthquake shocks several times in the course of the 19th century, but Zermatt itself has taken scarcely any harm. The last occurred on Aug. 21, 1895, at 9.15 a.m. It was a single, moderately strong shock, accompanied by loud noise. Many persons rushed out of the Hotels in alarm. There was a second, feebler shock at 1 p.m. on the same day, attended by a very loud noise, resembling that made on the fall of a great avalanche. I could not learn that damage was done in any part of the Valley.

At the end of July, 1855, the earthquakes were more severe. Canon J. G. Smyth, who was at Zermatt at the time, says, "we were assembled a little before dinner and suddenly heard a rumbling, and presently felt the floor shaking, just as if all the people in the Hotel had taken to dancing about the different rooms. On looking out of the window we perceived some large stones tumbling down into the valley. The shocks were repeated two or three times at intervals. . . No damage was done at Zermatt. . . At St. Nicholas the whole side of one of the Hotels was thrown down, so that people outside could see into the bed-rooms." The damage done on this occasion at St. Nicholas and other places lower down the valley was very extensive.

Bridges.—Those who desire to make Excursions alone will do well to acquaint themselves with the Bridges. 1. There is first the Village Bridge, called *Schwibsteg*, which is reached by the lane (usually in a filthy condition) on the southern side of the Mont Cervin Hotel, or by a path at the back of the Hotel Zermatt. The way over it leads to Haueten, etc. 2. The next bridge higher up the Mattervisp is called the Riffel Bridge (*Pont du Riffel*). This is the bridge for the Riffelberg, Gornergrat, etc. These two are marked on the Plan of Zermatt. 3. The next one higher up, called *zum Waldsteg*, is over the Zmutt torrent, just above its junction with the Mattervisp. Go over it to the Gorges of the Gorner. 4. Half a kil. higher up the Zmutt torrent there is the bridge for the Lac Noir, Hörnli, etc., called the Matterhorn Bridge (*Pont du Mont Cervin*). The little bridge in the middle of the village crosses the Triftbach, coming from the Trift Gorge. The first bridge *below* the village was erected in 1899, and is called *Spisbrücke*.

Guides and Mules.—Guides are in demand at Zermatt, yet there is not a *Bureau* or any place where a would-be employer can learn what Guides are available. He has first to occupy his time in searching for men out of work, and then to enquire whether those he proposes to select are fit to employ on the contemplated excursion. This is wasteful of the time of the employer; and many persons quit Zermatt, without making excursions they wish to make, from inability to meet with the right men,—although there may be at the moment a dozen or a score of competent guides available, who, in consequence, lose business.

Zermatt is a meeting-place for Guides. Besides the men of the district, whose names are given in Appendix G, and other Valaisan guides, one often finds there some of the best men from the Oberland, the Engadine, Chamonix, Courmayeur and the Val Tournanche; and it would be a convenience to tourists, and would put annually many thousands of francs in the pockets of those who want them, if an



THE FINDELEN BRIDGE, GORNERGRAT RAILWAY.

Office could be opened for the registration of Guides out of employment, where employers might call and make enquiries.[1] **Mules and drivers** can be engaged at the Hotels.

The Gornergrat Railway, from Zermatt to the Gornergrat, was opened in August, 1898. The terminus at Zermatt is opposite to the Station of the Zermatt—Visp line. It will always be necessary to change trains.

This is an electric railway, one mètre gauge. The first 300 mètres over the meadows are level. The line then crosses the Mattervisp by an iron bridge of 24 mètres span, and after that no more is level.

At the commencement, the gradients are not steeper than the steepest ones on the Viège—Zermatt line,—that is to say 12 in 100; but after passing the bridge at the entrance to the Findelen Valley they are almost always 20 in 100. The line at this part is already a considerable elevation above Zermatt and the mule-path to the Riffel, and gives fine views of the Gabelhorn and Zinal Rothhorn. After passing through three small rock tunnels of ordinary character, it arrives (at kil. 3) at a fourth tunnel, 200 mètres long, which makes a complete semi-circle, and mounts 1 in 5 all the way through! The upper end of the tunnel, which is quite a short distance from the lower entrance, is thus 131 feet above it! Shortly afterwards, the line makes a great sweep round to the right, and at kil. 5 approaches the Riffelalp Hotel, where there is the first Station. A Tramway leads from the Station to the Hotel. There are then several curves, and at kil. 6·6 one reaches the second Station, Riffelhaus, close to the Hotel. So far, the railway has not touched the mule-path, but after this line and path are close together. The little lakes at the foot of the Riffelhorn are passed at kil. 8, and the line terminates at a sort of plateau, 9908 feet, 3020 mètres, to the W. of the Gornergrat, at kil. 9·2. In this distance it rises 4593 feet (1400 mètres).

This is a rack railway, worked by electricity. As it has gradients so steep that it would be impossible to obtain sufficient adhesion on an ordinary pair of rails, the line has, throughout its entire length, a third, central, rack rail, on the Abt system. The most important works upon it are the semi-circular tunnel, and the great bridge over the Findelenbach. This is in three spans, and from the level of the torrent, which it crosses, to the rails, is a height of 164 feet (50 mètres), or 16 feet more than the bridge at Fribourg (on the Lausanne—Berne line), which until the opening of this line was the loftiest in Switzerland. The estimated cost of the line (including an electric installation capable of developing 1500 h.p.) was 3,500,000 francs.

In 1899, there were five ascending and five descending trains daily, during the Season; which took 1½ hours either going up or coming down. An ascent of the Gornergrat from Zermatt in 90 minutes can only be effected by a very fast walker, but a *decent* pedestrian can come down from the Gornergrat Station to Zermatt in 80 minutes, or *less*. The fares are—Zermatt to Riffelalp 6 frs.; return tickets 9 frs. Riffelalp to Gornergrat 6 frs.; return tickets 9 frs. Zermatt to Gornergrat 12 frs.; return tickets 18 frs. A considerable reduction is made to Schools, or to parties of not fewer than 16 persons travelling together. These reduced rates can be learnt in the Seiler Hotels, and elsewhere.

[1] In the *Jahrbuch des Schweizer Alpenclub*, 1897, p. 402, there are the following remarks, "Le Comité central a constaté avec peine que les deux guides victimes de la catastrophe au Lyskamm ne figuraient pas sur nos tableaux d'assurance. La répugnance ou la négligence des guides valaisans à se faire assurer contre les accidents disparaîtraient certainement dans une grande mesure si les guides étaient organisés en corporation par vallée ou par région. Le Comité central discutera s'il ne convient pas que le Club Alpin Suisse fasse des démarches pour provoquer cette organization *qui offrirait encore d'autres avantages.*"

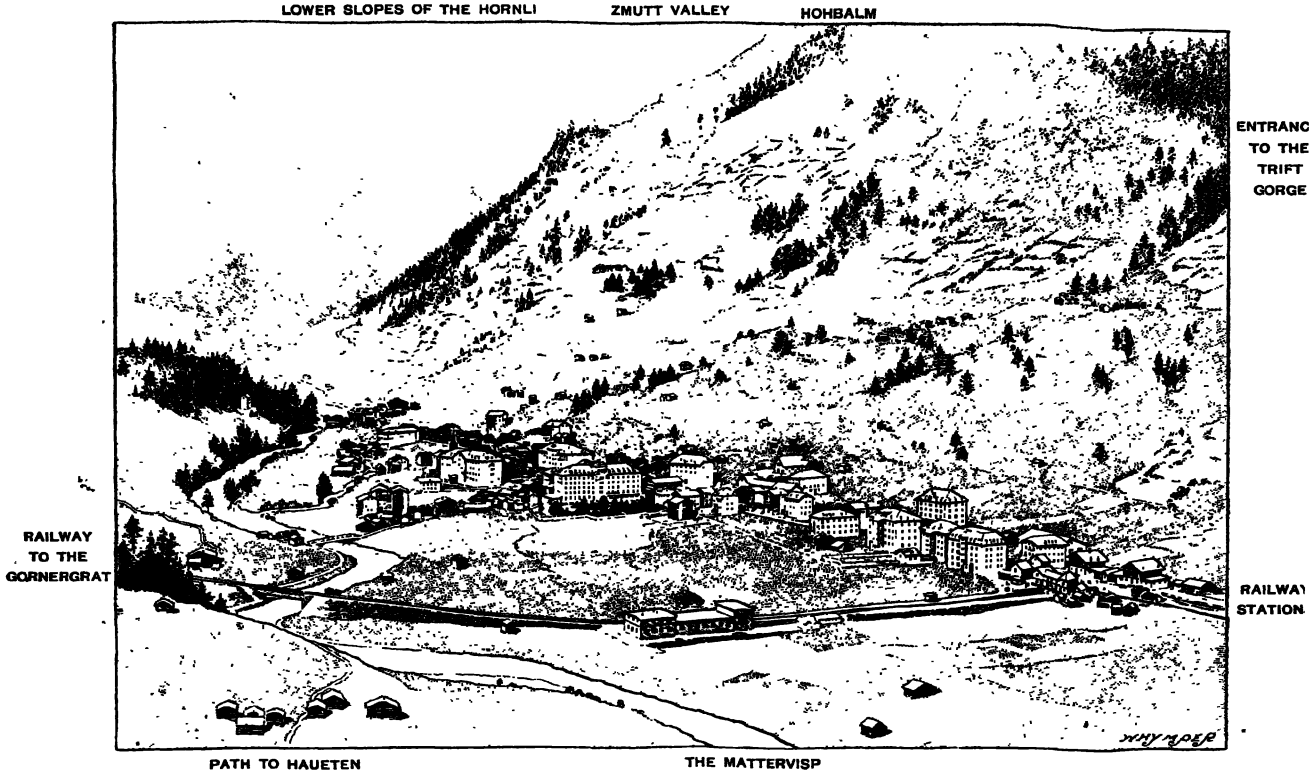
I agree with these remarks, and think that the Guides of the Zermatt District would find it to their interest to establish a Bureau where tourists could learn the names of Guides out of employment.

CHAPTER IX.

EXCURSIONS FROM ZERMATT.

TO THE RIFFELALP—LAC NOIR (SCHWARZSEE)—ZMUTT AND STAFFEL—GORGES OF THE GORNER—THE FINDELEN VALLEY—TRIFT GORGE—HÖHBALM—TÄSCH ALP AND VALLEY—HAUETEN—TO THE RIFFELHAUS AND GORNERGRAT—GUGEL—THE HÖRNLI RIDGE AND THE MATTERHORN CABANE—THE ZMUTT GLACIER AND STOCKJE—ASCENT OF THE GORNER GLACIER TO THE RIFFELHORN—THE FLUH ALP AND UPPER FINDELEN GLACIER—TRIFT HOTEL AND TRIFT-KUMMEN—TUFTEREN ALP TO EGGEN—THE RIFFELHORN—A ROUND *VIA* STAFFEL, THE LAC NOIR, ETC.—THE STOCKHORN PASS—METTELHORN—UNTER GABELHORN—UNTER AND OBER ROTHHORN—WELLENKUPPE—TRIFTHORN—OBER GABELHORN—ZINAL ROTHHORN (OR MOMING)—DENT D'HÉRENS—DENT BLANCHE—PASSES FROM ZERMATT—THÉODULE PASS (MATTERJOCH)—ASCENT OF THE BREITHORN—PETIT MONT CERVIN—BREUIL AND THE VAL TOURNANCHE—GUIDES OF THE VAL TOURNANCHE—GOUFFRES DES BUSSERAILLES—VAL TOURNANCHE—CHÂTILLON—COL DE TOURNANCHE—TIEFENMATTENJOCH—COL DE VALPELLINE—COL DU MONT BRULÉ—COL DE COLLON—COL DE BERTOL—AROLLA—COL D'HÉRENS—COL DE LA DENT BLANCHE (ZINALJOCH)—COL DURAND—ARBENJOCH—WELLENJOCH—TRIFTJOCH—A TRAGEDY ON THE TRIFT—MOMING PASS—HOW TO GET TO ZINAL.

EXCURSIONS from Zermatt are divided in this chapter into **A.** simple *Walks.* **B.** *Extensions of excursions* 1—9. **C.** *Ascents.* **D.** *Passes.* Those which come under **A** are within the capacity of all; but the majority of those which are included in sections **C**, **D** are only suitable for persons who have at least an elementary acquaintance with the art of the mountaineer. An unlimited number of variations can be made upon the excursions which are enumerated, the central position of Zermatt giving it unique advantages, and permitting an almost infinite variety of combinations. For **Tarif** see Appendix **D**, for **Guides** see Appendix **G**, and for Railway Fares see Appendix **H**.


LOWER SLOPES OF THE HORNLI
ZMUTT VALLEY
HOHBALM
ENTRANC TO THE TRIFT GORGE
RAILWAY TO THE GORNERGRAT
RAILWAY STATION
PATH TO HAUETEN
THE MATTERVISP

A. Walks around Zermatt.

§ 1. To the **Riffelalp Hotel**, by the ordinary path, returning by the Hotel-Pension du Glacier de Findelen and the Findelen Valley.

Go past the Church to the S. end of the Village, and cross the Riffel Bridge (see p. 134). [Near this bridge, on the right bank of the Mattervisp torrent there is RESTAURANT ZUM ALPENROSE, opened in 1900.] The way then rises to the hamlet of Winkelmatten, 5499 feet, 1676 mètres. At its Chapel the path divides. Take that on the right, which descends to a bridge over the torrent (Findelenbach) coming from the Findelen Valley. The path then remounts, and crosses a piece of flat meadow. After that it rises continuously to the Riffelalp Hotel. The first drinking-place is arrived at in about 45 min. from Zermatt, near the lower end of the semi-circular tunnel on the Gornergrat Railway (see p. 136), and in the immediate vicinity there are some of the finest and most picturesque views of the Matterhorn that can be had from this direction. So far, a good deal of the way is in shade. The path here turns sharply to the left, and in the middle of the day this is a hot piece. At the top of the twists and turns time can be saved by shaping a direct course towards the Riffelalp Hotel, across open ground, instead of following the regular path past the châlets of Augstkummen (where there is a second drinking-place). After the open ground, the path again turns to the left, and then doubles back to the

Riffelalp Hotel, 7307 feet, 2227 mètres; one of the Seiler Hotels, very popular from its excellence and position. Full and unimpeded view of the Matterhorn from its southern windows. Open from June 1 to October 15; 250 beds; Pension 10 to 16 francs per day; Catholic and English Chapels; Post and Telegraph. In the middle of the season this Hotel is usually full and overflowing, and those who propose to take up residence there should make inquiry at one of the Seiler Hotels, before leaving Zermatt, to learn if there is room. A Tramway connects the Hotel with the Station on the Gornergrat Railway.

Instead of returning the same way, which would take about 40 min. (anything less is quick time), continue the walk to the Findelen Valley, by the path which starts *at the back of the Hotel*. Good path, partly in shade; slightly undulating; with excellent views of the Matterhorn, Dent Blanche, Gabelhorn, Rothhorn (Moming) and Weisshorn. In 40 min. it arrives at the HOTEL-PENSION DU GLACIER DE FINDELEN, situated a few hundred feet above the ice, on the left bank of the valley. Descend from it to the bridge over the Findelenbach (a short distance below the end of the glacier) in 20 min.; remount to the Village of Findelen, and take the path back, down the right bank of the valley, that joins the route by which you came at the Chapel of Winkelmatten.

In ascending to the Riffelalp something can be saved by 'cutting' the path at several places. Look ahead. The following will be about the times occupied on the excursion.

Monte Rosa Hotel to Riffel Bridge	5 min.
Riffel Bridge to first drinking-shed	40 ,,
First drinking-shed to Riffelalp Hotel	45 ,,
Riffelalp Hotel to Hotel du Glacier de Findelen	40 ,,
Hotel du Glacier de Findelen to Findelen	25 ,,
Findelen to Monte Rosa Hotel	40 ,,
Total	3 hs. 15 min.

§ 2. To **the Lac Noir (Schwarzsee)**, ascending by the old path and descending by the new one, or *vice versâ*.

Go to the S. end of the village, and follow the path marked P on the Plan

of Zermatt. The path divides about 8 min. after passing the Riffel Bridge. Take the one on the right [the other goes to the Gorges of the Gorner], which rises, continues on the left bank of the stream, and in about 12 min. more comes to the Matterhorn Bridge (Pont du Mont Cervin). See p. 133. After crossing this bridge, it bears round to the right, and in 9 min. more passes through the hamlet of Zum See. Shortly afterwards it commences to rise steeply, and in about 20 min. from Zum See divides again. Here there is a shed, inscribed

VINS BIERE THE LAIT

Take the path on the left [the other one goes up the Zmutt Valley to the châlets of Staffel], and in 18 min. or so more you arrive at a second drinking-place, at the hamlet Hermattje, overlooking the Gorner Glacier. Thence the way mounts directly towards the Hörnli, and in about 25 min. divides again. It is immaterial which way is taken, as both lead to the Lac Noir. The right hand one (the old path) has fine views of the Rothhorn, Ober Gabelhorn and Dent Blanche; and the left hand or new path (rather the steeper of the two ways) has a magnificent prospect over the Gorner Glacier up to Monte Rosa. In 2¼ to 2½ hours from Zermatt you come to the

Hotel du Lac Noir (Schwarzsee), 8494 feet, 2589 mètres; one of the Seiler Hotels; near the lakelet of the same name; 50 beds; Pension 9-12 frs. Mugs of beer can be had here. The view from this place is extensive, and embraces nearly all the peaks in the Zermatt district. At the Chapel against the Lake (see Illustration on p. 55), Mass on Sundays at 8 a.m. Descent can be made to Zermatt by either of the two ways in 50 min., moving briskly; or by a more circuitous path *viâ* the châlets of Staffel and the Zmutt Valley in about 2 hs.

§ 3. To the Châlets of **Staffel and the end of the Zmutt Glacier,** *viâ* the Village of Zmutt, returning by the right bank.

Follow the route for the Lac Noir nearly to the Matterhorn Bridge. A little short of it, a path goes away on the right. Take this, to the **Village of Zmutt,** 6365 feet, 1910 mètres. Chapel. Old châlets. Time from Zermatt, 1 hour. In the middle of the day, this place is often completely deserted, everyone being at work out of doors. Descend in 5 min. to a bridge over the Zmuttbach (romantic position), a few hundred yards away, on the W. of the Village. Cross it and turn to the right, up the valley. The way to Staffel lies almost entirely through forest (many Arolla pines), picturesque, and well-shaded. On getting clear of the trees there is a remarkable view of the Matterhorn, which will be a surprise to those who have only seen the mountain from the Riffelalp (see p. 49). "There are precipices, apparent, but not actual; there are precipices absolutely perpendicular; there are precipices overhanging, there are glaciers and hanging glaciers; there are glaciers which tumble great *séracs* over greater cliffs, whose débris, subsequently consolidated, becomes glacier again."—*Scrambles amongst the Alps.* The châlets of Staffel, 7021 feet, 2140 mètres, are close to the end of the Zmutt Glacier, and a rough path or track continues for some distance up its right bank. Several spots in the vicinity of the châlets are well-adapted for picnics. Good water. Bring food,—prices are high at the small inn at Staffel. For returning home down the right bank of the valley (good path all the way), and through Zum See and across the Matterhorn Bridge, allow 80 to 90 minutes. I strongly recommend this Excursion.

§ 4. To the **Gorges of the Gorner** and the end of the **Gorner Glacier,** going by the zum Waldsteg Bridge (see p. 134), and returning by the Matterhorn Bridge.

Take the path marked P on the Plan of Zermatt to the zum Waldsteg Bridge, which crosses the Zmuttbach, 10 to 12 min. above the Riffel Bridge. On its farther side the path divides. That on the right leads through the hamlet of Platten; that on the left gets in 7 min. to the northern end of the **Gorges.** Admittance 1 franc. At the entrance there is a small erection

called 'Travellers rest,' where refreshments can be obtained. "This gorge seems to have been made chiefly by the torrent, and to have been excavated subsequently to the retreat of the glacier. It seems so because not merely upon its walls are there the marks of running water, but even upon the rounded rocks at the top of its walls, at a height of seventy or eighty feet above the present level of the torrent, there are some of those queer concavities which rapid streams alone are known to produce on rocks."—*Scrambles amongst the Alps.* The plank path through the Gorges emerges not far from the end of the **Gorner Glacier.** This glacier has retreated at least ½ mile



GORGE OF THE GORNER.

since 1860, and it has now no ice-cavern at its extremity. To get to it, cross the bridge which will be seen. Return home *viâ* Zum See and the Matterhorn Bridge in about 35 min. The round, allowing for halts, can be made comfortably in 3 hours.

§ 5. To the **Village of Findelen,** and end of the **Findelen Glacier.**

Cross the Riffel Bridge; pass the Chapel at Winkelmatten (take the path going straight on, and leave the Riffel path on the right). A few minutes afterwards the way commences to mount, and rises steeply through forest, on the right bank of the valley (passing châlets at Zum Stein, 6204 feet, 1891 mètres), and arrives at the **Village of Findelen,** 6808 feet, 2075 mètres, in little more than an hour from Zermatt. Chapel. No inn. At this village the path divides. The upper (left hand) one goes to the Fluh Alp on the right bank of the valley, and the other descends to a little bridge and remounts on the left bank to the Hotel-Pension du Glacier de Findelen. See § 1.

This Hotel can be seen from Findelen Village. After passing it, go about 30 min. up the left bank of the valley, cross the glacier to the other side, and return home through Findelen Village. The excursion can be made in an afternoon.

§ 6. To the **Trift Gorge,** and **Tea House.**

The Trift Gorge is immediately to the W. of Zermatt. A path to it starts at the English Church, and at first leads away from the Gorge, apparently in the wrong direction. When it has risen to a good height, and is opposite to the Hotel Terminus, it doubles back. Another more direct path starts at the passage on the S. side of the Monte Rosa Hotel, turns first to the left and then to the right, and leads in the direction of the arrow marked Q on the Plan of Zermatt.[1] These two paths meet at the entrance to the gorge, just before arriving at the bridge over the torrent. From this point one can *return* to Zermatt in 10 minutes. A small châlet, perched on a commanding position on the top of a cliff on the S. side of the Trift Gorge, was opened in 1896. Tea and other refreshments. Good view of the village can be had here. *Time from Zermatt, 35 to 40 min.* At the Tea House the path divides. The branch on the right goes up the Trift Gorge, and that on the left leads to

§ 7. The **Höhbalm,** about 8600 feet, midway between Zermatt and the Unter Gabelhorn.

A good broad path leads from the Tea House towards the Höhbalm for 15 min. It then becomes narrower. When opposite to and level with the Riffelalp Hotel it bears away to the right, and ultimately leads to the western side of the Unter Gabelhorn.

The views of the mountains on the south and east of Zermatt are very fine from the Höhbalm, and by going onwards towards the Unter Gabelhorn to the height of 9000-9500 feet one can obtain the grandest possible view of the Matterhorn.

This excursion is fit for the afternoon, as this side of the valley gets then into shadow, and the mountains to the east are seen at their best.

§ 8. To the **Täsch Alp and Valley.** See p. 125.

§ 9. To **Heueten (Haueten).** A stroll to the little Chapel (5804 feet, 1769 mètres) and back can be made within an hour. Fine view of Zermatt and the Valley. Wild raspberries round about, and many shady nooks and retired places, good for readers. Go over the Schwebsteg Bridge, and by the path marked R on Plan of Zermatt. An annual pilgrimage is made to this Chapel by the inhabitants of Zermatt.

B. Extensions of Excursions 1—9.

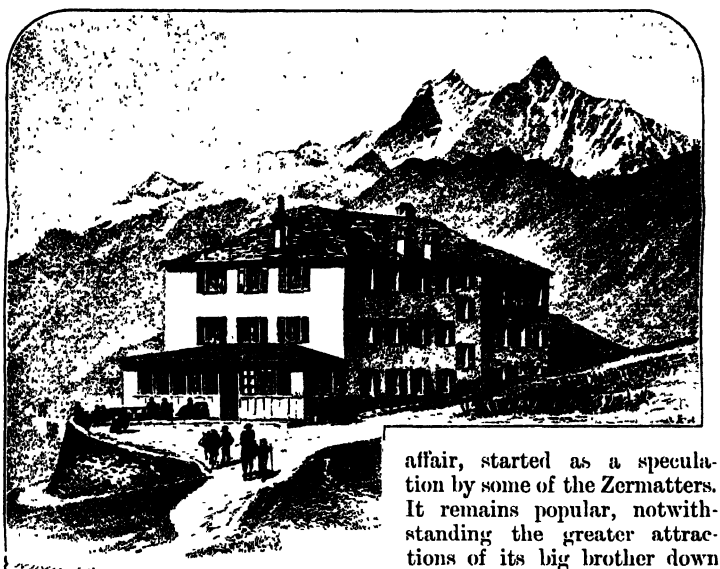
§ 10. **To the Gornergrat,** *viâ* **the Riffelalp Hotel and Riffelhaus.** The most popular of all the excursions that are made from Zermatt. The way leads past the front of the Riffelalp Hotel, turns to the left at the angle of the building, and cannot be mistaken. It then makes for the Hotel Riffelberg or Riffelhaus (which is in full view), and for part of the way is steep.[2] After this latter hotel is passed, the gradients are moderate up to the summit.

The **Hotel Riffelberg, or Riffelhaus,** 8429 feet, 2569 mètres; one of the Seiler Hotels; open from June 10 to September 30; 50 beds;

[1] Upon a rocky eminence about midway between the Monte Rosa Hotel and the entrance to the Trift Gorge there are some slight remains of what may have been a tower, which are reputed to be the remnants of one that belonged to the *Seigneurs* of Rarogne.

[2] "The Riffelberg, which from the second week in August is about as bare as the South Downs, is in July an almost continuous carpet of flowers, and it would be a good summer's work to botanize this district alone. Half way up the path from Zermatt, in addition to the usual Anemones, there is an abundance of the purple *Anemone Halleri;* and higher up comes the small but elegant *A. baldensis,* and some of the rarer Ranunculuses, such as *R. Pyrenæus* and *R. rutæfolius.*"—T. W. Hinchliff.

Pension 10 to 14 francs per day in July and September (*Pensionnaires* are not taken in August). Post and Telegraph. This Hotel was the earliest established of all the mountain inns round Zermatt, and was formerly called "The Riffel." Originally, it was a very small affair, started as a speculation by some of the Zermatters. It remains popular, notwithstanding the greater attractions of its big brother down below.



THE RIFFELHAUS (THE OLD RIFFEL HOTEL).

The path leads away from the front of the Hotel, and in half an hour leaves the Riffelhorn on the right. Fine view here of the Breithorn. The prospect around increases in grandeur and extent as one rises, until at last, at the summit, one is encircled by a complete panorama of snowy peaks. For their names and elevations see Map of the Valley of Zermatt. The summit, 10,289 feet, 3136 mètres, is now crowned by an inn, HOTEL-RESTAURANT BELVÉDÈRE (erected by the Commune in 1891-6), which intercepts the view, and does not add to its beauty. The southern portion of the panorama, extending from the Lysjoch to the Breithorn, is perhaps the most striking section (see folding plate at the end of the volume, which is self-explanatory), and can hardly be rivalled in the Alps.

The excursion may be prolonged by going to the Hohthäligrat, and the Stockhorn, or by crossing the Gorner Glacier to the *Cabane* Bétemps, on the rocks called Untere Plattje. Return home can be varied by descending on to the Gorner Glacier, coming 2 or 3 kils. down the ice, and remounting either upon the upper or the lower side of the Riffelhorn. The times ascending are--

	h.	min.
Zermatt to Riffelalp Hotel	1	30
Riffelalp Hotel to Riffelhaus		40
Riffelhaus to top of Gornergrat	1	15
Total . .	3 hs.	35 min.

Moving briskly, one can come down from the Gornergrat to Zermatt by the regular way (taking advantage, however, of all the short cuts) in 83 min.

CASTOR & POLLUX THE BREITHORN PETIT MONT CERVIN



BREITHORN, FROM THE ORTI

This excursion can be made at any time of the day, but the morning is to be preferred.

§ 11. **Ascent of Gugel,** 8882 feet, 2707 mètres. This can be included in Excursion 10. Gugel is an eminence, well seen from Zermatt, lying to the N.E. of the Riffelhaus, and E. of the Riffelalp Hotel. In descending from the Gornergrat, strike off to the right from the path, when about ¼ h. down, at the drinking-shed kept by Kronig. Though only 453 feet higher than the Riffelhaus, Gugel commands a much finer prospect. It looks right down the Valley of Zermatt, overlooks the Findelen Valley and Glacier, the Trift Valley, and every peak is visible from it that can be seen from the Gornergrat, excepting Monte Rosa. The Riffelhorn groups effectively with the Breithorn, and the view of the Matterhorn is the finest that can be had of it from the North. For obtaining a comprehensive understanding of the surroundings of Zermatt, there is no single *pointe de vue* equal to the summit of Gugel. It can be reached in half an hour from the Riffelhaus. From its summit one can descend direct upon the Riffelalp Hotel, or go down into and return by the Findelen Valley.

§ 12. A visit to **the Hörnli** and the **Matterhorn cabane** on the Hörnli ridge is an extension of Excursion 2.

There is a fair path, starting in front of the Lac Noir Hotel, which leads to the Hörnli; at first over rather rough, stony ground, then past a little lake (of recent formation) by the side of the Furgg Glacier, and then along the moraine on the left bank of the glacier. The path passes underneath and goes *beyond* the Hörnli, and a little clambering is necessary to reach the ridge from the moraine. Then double back to the cairn on **the summit,** 9492 feet, 2893 mètres. The views down the Valley of Zermatt, and (in the reverse direction) of the Matterhorn are striking.

The hut called the Matterhorn *cabane* (see Illustration on p. 80) is situated on the Hörnli ridge, upon the side facing the Furgg Glacier, a few hundred yards from the point where the Matterhorn rises abruptly. The way to it from the Hörnli is mainly along the crest of the ridge. Axes are required for a little cutting here and there in ice or snow. In 1899, the *cabane* was put into condition at the expense of the Swiss Alpine Club, and it is said that it will now accommodate twenty persons comfortably.

§ 13. To the **Zmutt Glacier** and **Stockje** is an extension of Excursion 3.

Upon leaving Staffel, continue along the moraine on the right bank of the glacier or close to it; cross it and make for the middle of the ice when tracks die out; steer as directly as possible for the N.E. end of Stockje (a cliffy island surrounded by glacier) and skirt the base of its southern cliffs. Good examples of *glacier-tables* are often to be seen on the Zmutt Glacier. Track is marked on the Map of the Matterhorn and its Glaciers. From the ruined *cabane*, about 9154 feet, 2790 mètres (on the S.W. end of Stockje), there is a magnificent view of the basin of the Tiefenmatten Glacier, with the Matterhorn, Tête du Lion, and the Dent d'Hérens on the farther side. The S.W. ridge of the Matterhorn is seen here nearly in profile, and the Col du Lion, Great Tower, and other points referred to in chap. ii are immediately opposite to the spectator. From this direction the Matterhorn looks its best under afternoon light. A whole day should be devoted to the excursion, starting early, and returning in time for *table d'hôte*. *Take provisions from Zermatt.*

The route by Staffel is that which is usually taken. One can also go *viâ* the Village of Zmutt and the *left* bank of the Zmutt Glacier. This is a trifle shorter than the other way.

§ 14. **Ascent of the lower portion of the Gorner Glacier,** to the Riffelhorn, returning by the Riffelhaus or by the Riffelalp.

This is a good excursion for those who wish to see a little of the ice world,

and to get instruction in the use of the ice-axe. It is only a *walk* if led by a competent guide. Go *viâ* the Matterhorn Bridge; take to the lower end of the Gorner Glacier (called the Boden Glacier) on the western side, where it is not steep. Use caution not to dislodge the rocks of the moraine which are sometimes poised very insecurely here. Go up the middle of the glacier, inclining, however, towards its W. side, and cross it below the 'ice-fall' when approaching the Riffelhorn. There are ways up the rocks on the N. side of the glacier both on the E. and the W. of the Riffelhorn. The former brings you to the Riffelhaus, and the latter to the Riffelalp Hotel. To make the round comfortably requires 6 or 7 hours.

§ 15. To the **Fluh Alp and the Findelen Glacier** is an extension of Excursion 5.

After passing the Village of Findelen, the path for a time rises to a considerable height above the glacier; but at the Fluh Alp, where there is a little inn which will be reached in 1¾ to 2 hs., they come near together. Notice the lateral moraines. The nearest one is grass-grown; the next is to a large extent composed of ice, having a superficial covering of boulders and moraine matter. The general level of the glacier is now much beneath the moraines, which probably are very ancient. The path is partly carried along them. When it dies out, cross the glacier, and return down the left bank. This excursion can be made longer or shorter, and is another which affords a peep into the ice-world. *Bring provisions from Zermatt.* Guides are necessary for all except experts.

§ 16. To **Triftkummen**, *viâ* the **Trift Gorge** and **Trift Hotel**, is an extension of Excursion 6.

The way up the Trift Gorge leads in about 1¾ hs. from Zermatt to a little inn. The path to it was improved in 1898, and is now a very fair one. The present Hotel replaces another about 5 min. higher up which was completely destroyed by an avalanche at the beginning of 1899. Soon after it is passed, the valley opens out into a rather considerable basin, bounded by the Unter and Ober Gabelhorns, the Trifthorn, Rothhorn (Moming), and the Mettelhorn. About 10 min. above the Hotel there is a *vallon* (**Triftkummen**) extending northwards (at the head of which there is the Mettelhorn), good hunting-ground for botanists and entomologists. Return can be made by a different path, which will bring you to the Railway Station at Zermatt. The round can be made in an afternoon.

§ 17. From Heueten, *viâ* the **Tufteren Alp** to the **Eggen Alp**, returning by the Findelen Valley, is an extension of Excursion 9.

From the Chapel at Heueten strike upwards towards the E. through the forest. The ground is easy, and paths may be ignored. When well above the trees, bear round to the right (*i.e.* to the S.), along the lower slopes of the Unter Rothhorn, and steer towards the Gornergrat, which will be perceived in the distance. Keep bearing round to the right, and presently you will see the châlets of Eggen. Return home through the Village of Findelen. The excursion may be lengthened by descending upon the Stelli See, instead of upon Eggen. The ground is easy, and one can go anywhere. This excursion is suitable for any hour of the day.

§ 18. The **Ascent of the Riffelhorn**, 9616 feet, 2931 mètres, may be combined with Excursions 1 or 10.

The Riffelhorn is a knob of rock S.S.E. of the Riffelhaus, distant 1½ kils., on the northern side of the Gorner Glacier. It is commonly ascended either from the E. or from the W. It can also be climbed from the S., *viâ* the Gorner Glacier, by more than one way. This side is steep.

Prof. J. D. Forbes, writing in 1855, said no guide of Zermatt had attained the summit of the Riffelhorn. "In 1841, I attempted it by the western side, and arrived within a few fathoms of the top, when I was stopped by a cleft. In 1842, however, some English students of Hofwyl found a circuitous path on the eastern side, by which the top may be gained without much difficulty." But it seems from a letter contributed by Mr. F. C. Grove to the *Alpine Journal* in 1874 that the boys of Hofwyl were not the first to get up the Riffelhorn. "The simple but exciting pastime," says Mr. Grove, "of rolling big stones from the top of the Riffelhorn on to the glacier below was the means last autumn" (1873) "of bringing a curious relic to light. Two American travellers who were enjoying this exhilarating sport last August determined to signalize their visit by sending down a bolt of unusual magnitude. Having fixed upon a stone of such size that it was as much as two men could do to move it, they prized it with great difficulty from its bed, when to their surprise they found in the site thus laid bare a javelin or spear-head, which must have been lying under the stone for time indefinite. The weapon thus strangely discovered was of bronze, and may have been some seven or eight inches long; the workmanship was admirable, quite as good as the forging one sees now. The striking end was not pointed, but beaten out into a blade resembling a boldly rounded chisel; the other end must have fitted wedge fashion into a cleft shaft, and had two flanges on each side. . . As it is not impossible that other weapons may be found near the place where this was discovered, it may be worth while for some travellers during the coming season to vary the sport of rolling down stones by a careful examination of the upper rocks."

Mr. Hinchliff, speaking of the ferns which may be found in this locality, said, "Hidden in the interstices of a group of loose rocks not far from the foot of the Riffelhorn, at a height of about 8600 feet, I know of a few specimens" (of the holly fern) "which, though very interesting in respect of the elevation at which they contrive to exist, are scarcely larger than those for which the Keswick guides endeavour to extort fabulous prices. Close to these, and concealed by the same friendly stones from all but the most inquisitive eyes, may be found a few tufts of *Asplenium viride*, with fronds of about half the usual length, but double the usual number—evidently the very best arrangement that could be devised for their protection at such an unaccustomed altitude. *Cystopteris fragilis*, in the same place, is not only dwarfed, but much beaten about by weather. About 100 yards further, however, in the recesses of a cave facing the Gorner Glacier, and entirely protected from the possibility of a chilling blast, it may be found in thick bunches of delicate green fronds, as perfectly developed as if they were at the bottom of an Italian valley."

There is a legend of a 'wild man of the Riffelhorn,' who was morose and unsociable, and was 'removed' by his neighbours in a way which strongly resembled murder. "A Zermatt, sur le Ryffel, dans le voisinage du Ryffelhorn, est une caverne assez spacieuse avec une étroite entrée. Là demeurait une fois un berger bien étrange. A force de garder seul ses moutons, il était devenu si farouche et misanthrope qu'il en était complétement sauvage et qu'il ne prenait sa nourriture quotidienne que si on la déposait quelque part, sans se laisser voir; car dès qu'il apercevait un être humain, il prenait la fuite et se cachait dans les montagnes. Peu à peu il se déroba aux regards, erra toujours dans la solitude autour des troupeaux, apaisant sa faim avec des moutons qu'il dérobait. Voulant en finir avec ce voleur de moutons, les gens du village cherchèrent à le prendre, mais leurs peines furent inutiles. Dès qu'il s'apercevait qu'on l'épiait, il fuyait toujours sur le Ryffelhorn où l'on arrivait par un sentier unique et dangereux. Il le défendait avec une telle intrépidité et recevait les assaillants avec un telle grêle de pierres, que ceux-ci renonçaient à emporter la forteresse. On ne vit pas d'autre moyen de s'en débarrasser que de tirer sur lui comme sur un chamois, ce que fit un jour un chasseur."—*L'Echo des Alpes*, Geneva, 1873, pp. 27-8.

Easy as the climb is upon the land side, the Riffelhorn has had its victim. On the morning of July 18, 1865, Mr. W. K. Wilson

made the ascent with some friends, accompanied by guides, and later in the day attempted to climb the peak alone. He was missed in the evening, and efforts were made from the Riffel to discover him; but, as they were fruitless, Mons. Alex. Seiler called for volunteers at Zermatt. We walked up through the night, and found the body of Mr. Wilson immediately, without search, on the side of the Riffelhorn above the lake. Apparently, he had fallen from a considerable height, and death had been instantaneous. Although so short a time had elapsed, the body was already in a shocking condition. See p. 131.

§ 19. A round *viâ* **Staffel, the Lac Noir,** etc.

A capital excursion (a combination of several of those already mentioned) can be made by going up the Zmutt Valley to Staffel, then turning to the left for the Lac Noir; descending upon and crossing the lower part of the Furgg Glacier, and proceeding by the Théodule route as far as the lower Théodule hut (Gandeck or Gandegg, see section **D.** Passes from Zermatt, and chap. xi); descending thence on to the Unter Théodule Glacier, and going by it *viâ* the Riffelhorn to the Riffelalp Hotel; returning by route § 1, *viâ* Findelen. An entire day should be allowed. Start early. Take lunch No. 1 at the Lac Noir Hotel, No. 2 at the Riffelalp Hotel, and get home in time for *table d'hôte*.

§ 20. By the **Fluh Alp** to the **Findelen Glacier,** and round by the **Stockhorn Pass,** returning down the whole length of the **Gorner Glacier.**

This is the finest excursion of its description that can be made from Zermatt. Every phase in the life of a glacier, from its cradle to its grave, can be seen upon it. There are Crevasses, open and concealed; Seracs and Ice-falls; Glacier-rivers and Moulins; Glacier-tables and Moraines. It is not included in the *Tarif*. Start before daybreak, and take provisions from Zermatt.

The route is by path until beyond the Fluh Alp, and then along the right bank of the Findelen Glacier, partly over moraine (the way so far is the same as for the Adler Pass). Cross the glacier in the direction marked on the Valley of Zermatt Map, and zigzag through some riven ice to the summit, 11,204 feet, 3115 mètres, which lies due E. of the Stockhorn. Grand view of the Lyskamm. Shortly afterwards the route joins that for the Cima di Jazzi and the New Weissthor. Upon arriving at Gadmen, do not take to the lower slopes of the Gornergrat, but continue down the whole length of the Gorner Glacier, and return home by the Matterhorn Bridge. If led by a competent guide, this excursion is a walk.

C. Ascents from Zermatt.

Zermatt itself is not the best starting-point for several of the Ascents which are included in the Zermatt *Tarif*. For some it is better to start from the Riffelalp Hotel (see chapter x), and for others from Randa (pp. 118-121), the Täschalp (pp. 122-5), etc. The following ones are still made from Zermatt, though there are a few of these (Ober Gabelhorn, Zinal Rothhorn, Trifthorn, etc.) for which the Trift Inn is sometimes used.

The **Mettelhorn,** 11,188 feet, 3410 mètres; 7 to 8 hs. up and down. There are two ways from Zermatt, both leading to Triftkummen. See § 16. One can ride up to the head of this *vallon;* thence it is 30 to 40 min. over snow and rock to the top of the Mettelhorn. The view is good from it of the Weisshorn, Zinal Rothhorn, Gabelhorn and Matterhorn, but it is as a whole inferior to that from the Gornergrat, which can be seen with less trouble.

The **Unter Gabelhorn**, 11,149 feet, 3398 mètres, 8 to 9 hs. up and down, is sometimes ascended *viâ* the Trift Inn, but more generally by the path mentioned in § 7 on p. 142, which leads to the western side of the mountain. As a point of view this is also inferior to the Gornergrat.

The way for the **Unter Rothhorn**, 10,190 feet, 3106 mètres (6 to 7 hs. up and down), goes by Heueten and the Tufteren Alp (see § 17) round the N.W. slopes of the mountain, and then turns to the S.E. up a *vallon* (Riederkummen) leading to a depression between it and the Ober Rothhorn. From this Col (9800 feet, 2987 mètres) turn to the right, up the peak. Then descend to the Col, and re-ascend by the crest of the ridge to the summit of the **Ober Rothhorn**, 11,214 feet, 3418 mètres. Return again to the Col, and descend into the Findelen Valley, between the Stelli See and Eggen, and come home *viâ* the Village of Findelen. The round can be made in 7½ to 8½ hs., and is a good preparatory walk for those who wish to make more difficult excursions. The Ober Rothhorn is one of the most splendid points of view in the Zermatt district.

The **Wellenkuppe**,[1] 12,828 feet, 3910 mètres, and the **Trifthorn**, 12,261 feet, 3737 mètres, are more considerable peaks,—the former on the S. and the latter on the N. of the pass called the Triftjoch, from the summit of which both can be ascended. The view from each is shut out to a large extent by their loftier neighbours the Ober Gabelhorn, and Zinal Rothhorn. These latter are two of the chief mountains one can ascend from Zermatt, and in connection with them there are incidents to relate, which are instructive, without comment. The first illustrates the desirability of making sure, when approaching summits or when climbing *arêtes*, that there are no snow-cornices about; and the second the peril into which a party may be put by the presence of a single inefficient or clumsy person, and the foolishness of placing such an individual last in the line, when *descending*.

The **Ober Gabelhorn** (formerly called simply the Gabelhorn), 13,363 feet, 4073 mètres, was first ascended on July 6, 1865, by Messrs. A. W. Moore and H. Walker, with Jakob Anderegg, who left Zermatt at 12.20 a.m., went over the southern portion of the Trift Glacier (now called the Gabelhorn Glacier) to the wall of rocks at its head; climbed these to the N.E. ridge of the mountain, followed its *arête* to the summit, and returned to Zermatt by 7.15 p.m.

On the following day Lord Francis Douglas, with Peter Taugwalder *père* and Joseph Viennin, ascended the mountain from Zinal, and they saw, by the footsteps, that others had been there before them. "We sat down to dine," he said, in an account found amongst his papers, "when, all of a sudden, I felt myself go, and the whole top fell with a crash thousands of feet below, and I with it as far as the rope allowed (some 12 feet). Here, like a flash of lightning, Taugwald came

[1] The Wellenkuppe is the point marked 3910 mètres on the Valley of Zermatt Map. Its summit appears to have been first reached in July, 1865, by Lord Francis Douglas, upon one of his attempts to ascend the Ober Gabelhorn. The following remarks, which were found after his death among his papers, contain all that is known on the subject. "We had made two previous attempts" (to ascend the Ober Gabelhorn) "in vain. In the first attempt we ascended the Unter Gabelhorn, leaving Zermatt at 11 o'clock at night, but, at 3 o'clock on the following day, found ourselves only at the foot of the Gabelhorn, and had to return. In the second attempt, we reached the summit of another peak of the Gabelhorn, about 13,000 feet in height, which lies immediately to one's left in crossing the Trift pass from Zermatt, but the *arête* connecting this with the Gabelhorn was found impracticable. I cannot conceive why this mountain has no name. It is very often mistaken for the Gabelhorn."

right by me some 12 feet more; but the other guide who had only the minute before walked a few feet from the summit to pick up something, did not go down with the mass, and thus held us both. The weight on the rope must have been about 23 stone, and it is wonderful that, falling straight down without anything to break one's fall, it did not break too. Joseph Viennin then pulled us up, and we began the descent to Zermatt."[1]

Both of these routes are long. On Sept. 3, 1877, Messrs. W. E. Davidson and J. W. Hartley, with Peter Rubi and Johann Jaun, hit off a better one, and it is this which is now usually followed, with a slight variation. They followed the usual path to the Triftjoch until they reached the top of the moraine dividing the Trift from the Gabelhorn Glacier, and crossing the glacier made for a well-defined snow col, at the foot of the final peak, on the S.E. ridge (that running from the Ober to the Unter Gabelhorn, separating the Arben from the Gabelhorn Glacier). From the col, they followed the *arête* of the ridge, sometimes bearing down a little on to the eastern face. From Zermatt and back occupied 11 hours actual walking. The Gabelhorn has also been ascended by several other routes.

In 1895, Mr. W. E. Davidson, with Christian Klucker and Daniel Maquignaz, started from the Trift Inn and ascended the Wellenkuppe; then went straight along the *arête* of the ridge connecting it with the Ober Gabelhorn; crossed the latter mountain and descended to the Arbenjoch; and returned to the Riffelalp Hotel the same evening!

The **Zinal Rothhorn** (or **Moming**),[2] formerly called the Rothhorn only, 13,855 feet, 4223 mètres, was first ascended from the side of Zinal by Mr. F. C. Grove and Sir Leslie Stephen, with the guides Melchior and Jakob Anderegg, on Aug. 22, 1864. The usual route for the Trift Pass was taken from Zinal as far as the top of the great 'ice-fall' of the Durand Glacier; they then turned to the left, *i.e.* to the north-east, and made for the ridge connecting the Rothhorn with Lo Besso, and went along this ridge until it joined the northern ridge of the Rothhorn, which was then followed to the summit. The difficulties were concentrated in the last part of the ascent. Three principal pinnacles upon the northern ridge had to be turned or surmounted. After the second one had been passed, Sir Leslie says, "The third, which now rose within a few yards, was of far more threatening appearance than its predecessors. After a brief inspection we advanced along the ridge to its base. In doing so we had to perform a manœuvre which, though not very difficult, I never remember to have previously tried. One of the plates to Berlepsch's description of the Alps represents a mountain-top, with the national flag of Switzerland waving from the summit and a group of enthusiastic mountaineers swarming round it. One of them approaches, astride of a sharp ridge, with one leg hanging over each precipice. Our position was similar, except that the ridge by which we approached consisted of rock instead of snow. The attitude adopted had the merit of safety, but was deficient in comfort. The rock was so smooth, and its edge so sharp, that as I crept along it, supported entirely on my hands, I was in momentary fear that a slip might send one-half of me to the Durand and the other to the Schallenberg Glacier." Including halts, 16 hs. 50 min. were taken in going from Zinal to the summit and back.

A way up the Rothhorn from Zermatt was found on Sept. 5, 1872, by Messrs. Dent and Passingham, under the leading of that excellent mountaineer and guide the late Franz Andermatten, with two other guides. The route taken on this occasion is substantially that which is followed at the present

[1] I think this account is exaggerated, and that the rope could not have failed to part if the two fell the distance and in the manner described. The summit of the Ober Gabelhorn and the crests of the ridges near it are frequently garnished with snow-cornices (such as broke away on this occasion), which are distinctly visible from the Lac Noir and Riffelalp Hotels.

[2] There are three other Rothhorns in the Valley of Zermatt. See Appendix E.

time. It is marked on the Map of the Valley of Zermatt. The summit is reached from the south. Including halts, 16 hs. were occupied from Zermatt and back. In descending when not far beneath the top, an incident occurred (happily without serious result) of a closely similar character to another which caused the loss of a life (at almost exactly the same place) in 1894. "Suddenly," says Mr. Dent, "I heard a shout from above; Franz and I both glanced up at once. A large, flat slab of rock that had afforded us good hold on the ascent, but proved to have been only frozen in to a shallow basin of ice, *had been dislodged by the slightest touch*[1] from above, and was coming straight at us. . . Just above me it turned its course slightly. Franz, who was close beneath me more in its direct line of descent, attempted to stop it, but it ground his hands cruelly against the rock, and passed on swiftly, straight to Imseng. A yell from us hardly awoke him to the danger: the slab slid on faster and faster; but, just as we expected to see our guide swept away, it gave a bound for the first time, and, as with a startled expression he flung himself against the rock face, it leapt up, and flying by within a few inches of his head thundered disappointed down below."

On Sept. 20, 1894, Dr. P. Horrocks was descending the Rothhorn, with the guides Peter Perrn[2] and Joseph Marie Biner, both of Zermatt; and, when at almost precisely the spot mentioned above, very nearly came to his death, through the dislodgment of a boulder. "Perrn, who was last, was standing behind and holding on to a fair-sized rock, round which he was paying out the rope; while Dr. Horrocks crossed the slab, and Biner gradually pulled in the slack. Suddenly the rock in which Perrn placed such confidence came out, and bounded down the mountain side. Perrn slid rapidly down the steep rocks; Dr. Horrocks, who had no foothold and very little handhold, was jerked from his position, turning a somersault, and becoming momentarily stunned from his head striking against the rock. The strain on the rope was too great for Biner to withstand, and he was dragged down too. The whole party half tumbled, half slid, down the very steep smooth rocks for 30 or 40 feet, when the rope between Dr. Horrocks and Perrn caught behind a projecting rock, and brought them both to a standstill. Perrn found himself landed in a small patch of soft snow some 15 feet below the rock which had so fortunately engaged the rope, while Dr. Horrocks, some 7 feet higher up, though at first suspended with his back to the steep rocks, was very soon able to get more or less foothold. Poor Biner had the extra length of his own rope still to fall, and, when the strain came, the rope broke, according to one account, half-way between him and Dr. Horrocks; according to another, rather nearer to the latter. Biner fell down on to the Durand Glacier some 2000 feet below." Dr. Horrocks was rescued from his perilous position by some guides who were closely following.

On August 4, 1899, Mons. Baumann of Zurich, and his guides J. Tabin and Antoine Antille of Vissoie, lost their lives on the southern side of the Rothhorn. They were found dead at the foot of some rocks on the northern side of the Trift Glacier. It is conjectured that they attempted a glissade on new snow overlying old snow, and by dislodging the surface came down *en avalanche*.

The Rothhorn was climbed from the W. in 1878. Time from the Mountet *cabane* to Zermatt 10½ hs. On Aug. 9, 1873, "Mr. F. Morshead, with Melchior Anderegg and Christian Lauener, started from the Zinal hut" (Mountet) "and crossed over the top of the Rothhorn to Zermatt in the astonishingly short space of nine hours (halts included)."—*Alpine Journal*, vol. vi. p. 365. Upon Aug. 22, 1903, Mr. E. A. Broome with two of the Pollingers ascended the Rothhorn *viâ* the Triftjoch, crossing the Trifthorn *en route*. From the summit of the pass to the top of the peak occupied 8 hs. See *Alpine Journal*, vol. xxi, p. 557.

[1] In the original, these words are not in italic. Although the name of the guide who dislodged this rock is not stated, it is easy to tell who he was. He is a man notorious for accidents.

[2] Not the Peter Perrn who is mentioned in earlier pages of this volume.

Certain of the ascents which are included in the Zermatt *Tarif* may be dismissed from consideration (**Plattenhörner** or **Blattenhörner**, S. of and less elevated than the Mettelhorn; **Ebihorn**; **Mominghorn**; **Mont Durand** or **Arbenhorn**; **Pointe de Zinal**; **Schallhorn** or **Schallihorn**). Others are best made from the Riffelalp Hotel (**Monte Rosa**; **Lyskamm**; **Castor** and **Pollux**). The **Breithorn** and **Petit Mont Cervin** are usually ascended *viâ* the Théodule Pass, and are referred to in section **D. Passes from Zermatt.** The **Dent d'Hérens** is ordinarily ascended from Prerayen (Valpelline), or from Breuil (Val Tournanche). The ascent of the **Tête Blanche**, when made, is generally combined with the passage of the Col de Valpelline.

The **Dent Blanche**, 14,318 feet, 4364 mètres, is the most important of the residual mountains included in the *Tarif*, but its ascent is better made from the head of the Val d'Hérens (Valley of Evolena) than from Zermatt, and upon such occasions as it is attempted from Zermatt it is usual to pass a night either on Stockje, or somewhere in the neighbourhood of the Schönbühl Glacier. It is not easy to say what length of time is likely to be occupied upon any of the several ways up the Dent Blanche, for it is known by experience that the time will largely depend upon the state of the weather and the condition of the mountain, and this is very variable.

The first ascent of the Dent Blanche was made on July 18, 1862, by Mr. T. S. Kennedy and Mr. W. Wigram, with the guides Jean-Baptiste Croz (brother of Michel-Auguste Croz) and J. Kronig of Zermatt, under unfavourable conditions. They started from the châlets of Abricolla (Alpe Bricolla), on the eastern side of the Glacier de Ferpècle, about 3 hs. above Evolena, and ascended partly by the S.W. face, and partly by the ridge running southwards from the summit. This track is marked on the Map of the Valley of Zermatt.

The Dent Blanche has also been ascended by the S. ridge; from the Schönbuhl Glacier; from Zinal by the E. ridge; and from Ferpècle by the westerly ridge. The following times have been occupied on various occasions.

1862. First Ascent. From Abricolla and back, 16 hs.
1864. Second Ascent, by Mr. Finlaison. From Abricolla and back, about 13 hs.
1874. Mr. Whitwell took 16 hs. 20 min. from a camping-place on the Schönbuhl Glacier, 6 hs. from Zermatt, to the top and back to Zermatt.
1876. Mr. F. Gardiner took 16¼ hs. from the Stockje *cabane* (now in ruins) to the top, and down to Ferpècle.
1882. Messrs. Anderson and Baker from the Mountet *cabane* to Stockje occupied about 19½ hs.
1886. Messrs. Lorria and Lammer took the whole of a long day in going from Stockje to the top, and did not get back to their starting-point at nightfall.
1889. Mr. Eckenstein, from Zermatt and back to Zermatt, took 39½ hs. *viâ* the Schönbuhl Glacier. Their route "is believed to be the worst yet taken."—*Alpine Journal*, vol. xiv, p. 499.
1890. Three Members of the Alpine Club took 38 hours from Stockje to the top, and back to Stockje.

In April, 1893, the Dent Blanche was ascended from Abricolla and back in about 21½ hours.

On August 11, 1882, Mr. W. E. Gabbett (a Durham Tutor) passed the night at Stockje, with Joseph-Marie Lochmatter and his eldest son, intending to make the ascent of the Dent Blanche on the next day, and to return to Zermatt. As they did not re-appear, search was made for them on the 14th, and the bodies of the three were found, 200 feet apart, about 2500 feet below

the summit, all frightfully disfigured and scarcely recognisable. Most of their clothing was gone. Mr. Gabbett was buried at Zermatt (see p. 131), and the Lochmatters at St. Nicholas (p. 110). The cause of the accident is unknown. The mountain is said to have been at the time in the best possible condition.

On August 28, 1899, Messrs. O. Jones and F. W. Hill left Abricolla to ascend the Dent Blanche by its western ridge, with the guides E. Furrer (Stalden), C. Zurbriggen (Saas Grund), and J. Vuignier (Evolena). When the party was about an hour from the summit, Furrer lost his hold; and, falling back, carried away three others. Mr. Hill survived, and gave an account of the occurrence in the *Alpine Journal*, vol. xix, pp. 591-3.

"Furrer was attemping to climb the buttress, but, finding no holds, he called to Zurbriggen to hold an axe for him to stand on. Apparently he did not feel safe, for he turned his head and spoke to Jones, who then went to hold the axe steady. . . Standing on the axe, which was now quite firm, Furrer could reach the top of the buttress, and attempted to pull himself up; but the finger-holds were insufficient, and before his foot had left the axe his hand slipped, and he fell backwards on to Zurbriggen and Jones, knocking them both off, and all three fell together. I turned to the wall to get a better hold, and did not see Vuignier pulled off, but heard him go, and knew that my turn would soon come. And when it did not I looked round, and saw my four companions sliding down the slope at a terrific rate." Their mutilated bodies were found on August 31, about 1500 feet below the place where Furrer fell.

D. Passes from Zermatt.

The **Theodule Pass**[1] **(Matterjoch or Colle S. Teodulo)**, 10,899 feet, 3322 mètres, is the most frequented of the snow-passes leading out of the Valley of Zermatt, and perhaps was the first that was discovered. See chap. i. It is easy to traverse, and is useful as a route between the upper Valley of the Rhone and the Valley of Aosta. De Saussure took mules across in 1789, and Ruden said (in 1870) that according to some of the old inhabitants the traffic between Zermatt and Aosta was very considerable. One might see, "though very seldom, a string of 25 to 30 beasts of burden" crossing it at one time. Cows and mules are still taken over occasionally. Of late years the glaciers which have to be traversed have shrunk considerably, especially that upon the Italian side. Although the crevasses on the route are seldom large, rope should always be employed. I have seen, upon various occasions, Italian peasants crossing alone, provided with no implement except an umbrella. Skeletons of persons unknown are found upon this pass from time to time.

The way to the Theodule from Zermatt leads over the Matterhorn Bridge, and at the beginning is the same as the route for the Lac Noir. See pp. 139-140. It branches off from the latter path at Hermattje[2] (p. 140), and mounts along the left bank of the Gorner Glacier, at some height above the ice: crosses the stream (Furggbach) coming from the Furgg Glacier, and ascends (sometimes in zigzags) towards the edge of the Ober Theodule Glacier (for track see Map of Matterhorn and its Glaciers), which it skirts, over rocky ground (part of this is called Leichenbretter), until arriving at Z'Wangen, the southern extremity of the rocks, where there is a small inn, at about 9900 feet, **Gandeck** or **Gandegg**, known as **the lower Theodule cabane**.

[1] Sometimes written Théodulepass, Theodul Pass, St. Theodule Pass. The height given above is the elevation assigned to it on the Siegfried Map. The *Carta d'Italia* makes it 2 mètres more. In ordinary conversation the pass is simply called "the Theodule."

[2] There is another way which diverges from the Lac Noir path a little earlier (two minutes above Zum See).

From Zermatt to Gandeck will occupy 3½ to 4 hs. The inn is situated close to the edge of the Ober Theodule Glacier. The *path* ends there, and mules go no farther. In fine weather, the way can hardly be mistaken up to this point, but the higher part of it is readily obscured even by a slight fall of snow. For routes to Gandeck from the Riffelalp Hotel and from the Lac Noir Hotel, see chaps. x, xi.

The distance from Gandeck to the summit of the Theodule, as the crow flies, is less than 3 kils.,—all over snow-covered glacier. Put on the rope before embarking on the ice. Steer S.W. for about 10 min., until well on the glacier, and then make direct for the small cliffs of the Theodulhorn which will be seen in front, towards the south. Skirt them on the east, and at their southern end turn sharply to the right, where you will find the **Inn (Pavillon du Col St. Théodule)** on the summit of the pass. Beds. Civil proprietor. Prices reasonable. When the place is not overcrowded, one may pass a night comfortably here. From Gandeck to the summit of the pass takes about 90 min.

The **View from the Summit** is interesting all round. The Matterhorn looks gigantic, and finer than from the Breithorn. One sees 'the shoulder,' and the notch between it and the final peak which stopped Tyndall; 'the Great Tower,' the Tête and Col du Lion, and various other points referred to in chap ii. See outline on p. 44. The Theodulhorn comes in front of the Matterhorn, and it can be readily ascended from the Pass. On the Italian side the Grand Paradis, Grivola and Ruitor are amongst the most prominent features in the distance, and the Bec de Luseney and Dent d'Hérens are the chief ones upon the right hand (western side) of the Val Tournanche. In the *sérac* close at hand, on the south, the stratification of the snow is generally well seen.

[The Petit Mont Cervin and the Breithorn.—In 1792, after measuring the height of the Matterhorn, De Saussure and his son, guided by Marie Coutet (Couttet) of Chamonix, went up the **Petit Mont Cervin,** and said that at that time it had never been ascended by mortal man. [*Voyages*, § 2247.] He called it 'la Cime-Brune du Breit-Horn,' but this appellation has not been adopted. The De Saussures declined the ascent of the Breithorn, partly on account of "the fatigue and dangers which the steepness of the slopes would have caused them," and also because examination of its rocks could not be made, from their being entirely covered with snow. "As it," he said, "presents a large and rounded summit to those who approach it on the side of Zermatt, the name *Breit-horn* or *Cime-Large* appears to suit it very well."

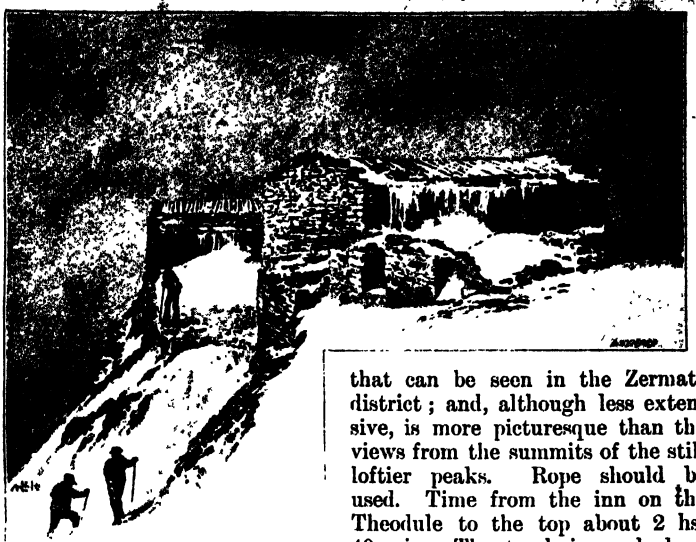
The **Breithorn** is said to have been first ascended by Mons. Henri Maynard in 1813.[1] Sir John Herschel went up it in 1821 (or 1822), and is said to have been "led to believe that he had attained the most elevated point of this great cluster, and to maintain that Saussure had greatly overrated its height" [*i.e.* the height of Monte Rosa] "in his trigonometrical measurement on the side of Macugnaga."[2] Lord Minto went up the Breithorn in 1830, with his son William (a boy of sixteen), who "excited much compassion" [at Zermatt] "as they thought it hard that so young a boy should be led up to perish so cruelly."

The Ascent of the Breithorn, 13,685 feet, 4171 mètres, has become extremely popular. It is best to start at an early hour from the inn on the Theodule (rather than from Zermatt or the Riffelalp), and to arrive on the summit *soon after daybreak*. The panorama that may be enjoyed from the top is one of the finest (some say *the* finest)

[1] I take this from Conway's *Climber's Guide to the Eastern Pennine Alps*, p. 6, but I have not been able to verify the statement. See also *Alpine Journal*, vol. xv, p. 437.

[2] Quoted from Lord Minto's diary in *Alpine Journal*, vol. xvi, p. 232. Lord Minto says that it was the wish to determine this doubtful point that first induced him to project his expedition.

In *Peaks, Passes and Glaciers*, 2nd series, vol. ii, p. 260, Mr. Tuckett says that he believed *no Zermatt guide had made the ascent of the Breithorn before* 1859!



ON THE TOP OF THE COL THEODULE.

that can be seen in the Zermatt district; and, although less extensive, is more picturesque than the views from the summits of the still loftier peaks. Rope should be used. Time from the inn on the Theodule to the top about 2 hs. 40 min. The track is marked on the Valley of Zermatt Map. Time descending to the inn 1 h. 15 min.

On leaving the inn, the way to the Breithorn at first slightly descends. It then mounts (for a time rather steeply) to a large snowy plateau, which is invisible from below, and, after that is crossed, turns N. towards the mountain, and leads up a steep bank of snow to the western end of the summit ridge, which is followed to the top. When descending, the **Petit Mont Cervin** (Klein Matterhorn), 12,750 feet, 3886 mètres, can be taken *en route* at the cost of a little more than an hour. For further references to the Breithorn see p. 175.]

The descent from the summit of the Theodule into the Val Tournanche commences at first in a N.W. direction, and the way skirts the base of the cliffs of the Furgg Grat, shewn in the illustration on p. 29. In less than half an hour the snow is quitted for *terra firma*, and the path descends in a (generally) W.S.W. direction to Breuil. The slopes are gentle, and one can go anywhere, but it is best to adhere to the path.

Breuil (Breil); HOTEL DU MONT CERVIN (ALBERGO DEL MONTE CERVINO), 6880 feet, 2097 mètres; HOTEL DES JUMEAUX, 6575 feet, 2004 mètres. The former is the larger. The Hotel des Jumeaux was opened in 1895 by Mons. Gab. Maquignaz, one of the very earliest explorers of the S. side of the Matterhorn. See p. 21.

The principal excursions from Breuil are—1. The Ascent of the Matterhorn. 2. Ascent of the Tête du Lion. 3. Ascent of the Dent d'Hérens. 4. Ascent of the Cimes Blanches. The view from the Cimes Blanches is not much inferior to that from the Breithorn, and the ascent can be made at any hour of the day, though early morning is to be preferred.

It often happens that there is a lack of guides at Breuil. In the middle of the season, the Val Tournanche men are more likely to be found at Zermatt than in their own valley. Those at present upon the Register are—



THE HOTEL DES JUMEAUX,

ANSERMIN Agostino.
AYMONOD G. Battista.
BARMASSE Giuseppe.
BICH G. Battista.
BICH Luigi Alberto.
BICH Pietro Daniele.
CARREL Cesare.
CARREL G. Batt.
CARREL Léonard.
CARREL Luigi.
GORRET Massimiliano.
MAQUIGNAZ Aimé.
MAQUIGNAZ Ange.
MAQUIGNAZ Antonio.
MAQUIGNAZ Daniele.
MAQUIGNAZ Giov. Battista.
MEYNET Alberto.
MEYNET Cesare.
MEYNET Salomone
PELLISSIER Gius. Andrea.
PELLISSIER G. Batt.
PERRUQUET G. Batt.
PESSION Abel.
PESSION Alessandro.
PESSION Bernardo.
PESSION Elia.
PESSION Franc.
PESSION Pietro Gius.
PESSION Silvano.
RAVAZ Salomone.

About 20 min. below Breuil, a few hundred feet to the E. of the path to Val Tournanche, there is a small lake **(Lac de Layet)** with water of exquisite purity. The lake has no streams flowing into it, yet maintains an almost constant level, although two small streams flow out of it. One of these falls into the Val Tournanche torrent, and the other into a lakelet or pool slightly below the larger one. This lakelet has no visible outlet, yet the level of the water remains almost always the same. The vicinity is well-wooded, and extremely picturesque, and at midday, in good sunlight, the colouring is brilliant.

Upon leaving Breuil **the path to Val Tournanche** follows the left bank of the valley, and for 35 min. keeps close to the torrent and descends gently. At about 50 min. from Breuil it comes to an abrupt descent, alongside the commencement of the **Gouffres de Busserailles,** where the valley narrows, and the torrent disappears in a profound gorge. A little plain succeeds, and then there is another, smaller, descent. In 1 hour from Breuil the path crosses to the right bank. Châlet against the bridge (with wine, beer, etc. at moderate prices), at the entrance to the **Gouffres,** which should be inspected. Admittance 1 franc. The torrent at this part of the valley passes through a fissure, which it has hollowed and polished in a remarkable manner. In Nov. 1865, Jean-Antoine Carrel induced two of the Maquignaz's to lower him by a rope into the chasm. One of the Maquignaz's subsequently descended in the same manner, and they were so struck by what they saw that they forthwith set to work with hammer and chisel to make a way into this romantic gulf, and constructed a rough but convenient plank gallery along its walls. In some

places the torrent has wormed the rock and left natural bridges. The most extraordinary features of the Gouffres are the caverns which the water has hollowed out of the heart of the rock. The plank path leads into one of the largest, about 28 feet in diameter, with the torrent 50 feet or so below. The cavern is lighted by candles, and talking in it can only be managed by signs. See *Scrambles amongst the Alps*, chap. vi.

The valley now opens out, and in about 20 min. you arrive at the Village of

Val Tournanche, pop. 1200 (in the Commune); 4813 feet, 1467 mètres; HOTEL DU MONT ROSE, small and plain. *Order Trout.* They are sometimes taken here up to 6 lbs. in weight. The Church of Val Tournanche is ornate internally, and has tablets outside to the memory of Canon Carrel (see p. 75), Jean-Antoine Carrel (p. 86, etc.), and J.-J. Maquignaz (p. 78). The principal **Excursions** are the ascent of



VILLAGE OF VAL TOURNANCHE.

the **Grand Tournalin**, 11,086 feet, 3379 mètres, situated due E. of the village, from the summit of which there is a magnificent panoramic view (see *Scrambles amongst the Alps*, chap. vi); and the passage of the **Va Cornère** (Gra Cornère, Col Courgnier, or Col du Mont Cornière), 10,325 feet? 3147 mètres? to the W.N.W. of the village,—a convenient way of getting across country to Prerayen in the Valpelline. The mule-path ends and a carriage-road begins at Val Tournanche. A post-cart goes in the afternoon, in 2 hs., to Châtillon, and comes up in the morning in 4 hours. *Before starting, have a clear understanding as to what the charge will be.* Voitures from Val Tournanche to Châtillon cost 8 to 12 francs, according to the bargaining power of the traveller.

Upon leaving Val Tournanche the road descends rapidly, and soon crosses to the right bank of the valley, on which side it continues nearly all the way to Châtillon. It becomes increasingly picturesque,

and for the most part of the distance passes through and under luxuriant foliage. Near **Antey**, notice the arches of an aqueduct on the western side of the valley, high above the road. They are *not* Roman, as some guide-books say; and appear to be the remains of an *unfinished* work. In 4 hs. from Val Tournanche you arrive at **Châtillon**, in the Valley of Aosta. HOTEL DE LONDRES (against the bridge); HOTEL-PENSION SUISSE. Trains go up the valley to Aosta in ¾ h., and down the valley to Ivrea and Chivasso for Turin, etc. etc.



NEAR ANTEY.

The following are average times on the Theodule Pass.

Zermatt to Châtillon.

	h.	min.
Zermatt to Gandeck (Gandegg)	3	45
Gandeck to Summit of Theodule Pass . . .	1	30
Summit of Theodule Pass to Breuil . . .	2	10
Breuil to Val Tournanche	1	20
Val Tournanche to Châtillon (on foot) . .	3	5
Total	11	50

Châtillon to Zermatt.

Châtillon to Val Tournanche	1	
Val Tournanche to Breuil	2	10
Breuil to Summit of Theodule Pass	3	20
Summit of Theodule Pass to Gandeck . . .		45
Gandeck to Zermatt	2	10
Total .	12	25

The **Breuiljoch** and **Furggjoch**, two passes to the W. of the Theodule, at the foot of the Matterhorn, are referred to in chap. xi. The next pass to the west, the **Col de Tournanche**, 11,378 feet, 3468 mètres, crosses from the head of the Tiefenmatten Glacier, a little W. of the Tête du Lion, to the head of the Val Tournanche. On the first passage, made on Aug. 25, 1864, 13 hs. 40 min. were occupied between Zermatt—Breuil. It is seldom traversed, and as a pass is useless. The **Tiefenmattenjoch**, 11,788 feet, 3593 mètres, between the Dent d'Hérens and the Tête de Valpelline, from the head of the western branch of the Tiefenmatten Glacier to the head of the Valpelline, like the last-mentioned, is useless as a pass, and is rarely crossed. Not recommended. Mr. A. W. Moore, who was its discoverer, said of it that it was evidently only passable under the Dent d'Hérens. "It unfortunately happens that this is the exact direction which every prudent man would desire to give as wide a berth as possible. . . The north face of the Dent d'Hérens immediately above is for the most part precipitous rock, but at about half its height runs a broad band of broken *séracs*. How the ice clings to the cliffs at all is a marvel, but that portions of it are liable to, and actually do, come down with a run at varying intervals of time, is a fact which the merest novice would see at a glance. The danger was palpable, and theoretically we ought not to have incurred it."—*Alpine Journal*, vol. v, p. 322.

The **Col de Valpelline**, 11,687 feet, 3562 mètres, the next pass on the west, leading from Zermatt to the Valpelline, is of a more practical character than the last-mentioned passes. For route see

the Map of the Valley of Zermatt. It leads up the Zmutt Glacier, Stockje, and Stock Glacier; passes between the Tête Blanche, 12,303 feet, 3750 mètres, and the Tête de Valpelline, 12,510 feet, 3813 mètres (either of which may be ascended in 1½ hs. from the summit of the pass); and descends upon Prerayen at the head of the Valpelline, *viâ* the Za-de-Zan Glaciers. From Zermatt to Prerayen or



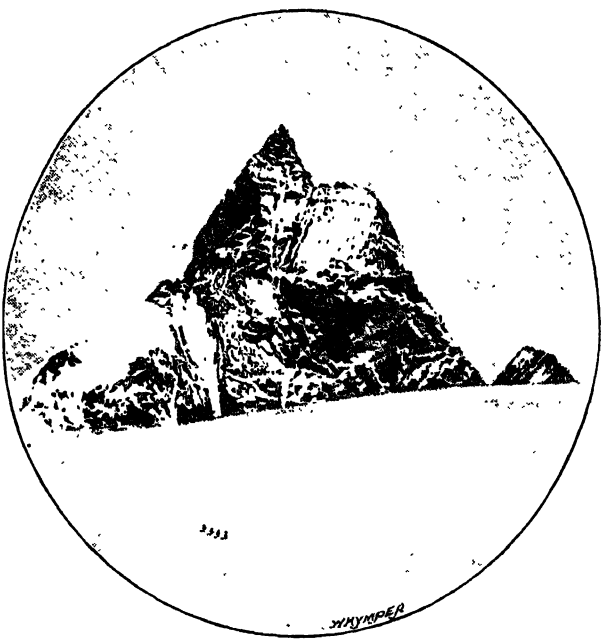
THE VILLAGE OF BIONA.

vice versâ reckon 10 hours. At Prerayen there is a small inn (poor place); thence to Biona (path sometimes rough) 4 hours. No inn. Wine can be had at the Curé's,—a chamois hunter, gunny and genial. Biona to Valpelline, path good, 1 h. 50 min.; small inn. Valpelline to Aosta in char-a-banc, 1¾ to 2 hs., or on foot a little more. At **Aosta**, HOTEL VICTORIA, against the Railway Station. Excellent hotel, kept by Sig. Bertolini of the Hotel Royal at Courmayeur.

The Valpelline cannot compare in picturesqueness with the Val Tournanche. The most striking view to be seen on the pass is of the Matterhorn, just after crossing the summit from the Italian side.

The following deviations from the ordinary route may be made by those who do not mind a little additional labour.

[From the head of the Haut Glacier de Za-de-Zan one can reach Prerayen by crossing the Col du Mont Brulé and the Col de Collon. Upon getting to the highest rocks on the Italian side of the Col de Valpelline, bear round to the right, to the right bank of the glacier, to the **Col du Mont Brulé** (a little to the north of Mont Brulé). Thence descend steep rocks mixed with snow to the head of the **Glacier d'Arolla**; and, upon touching the highest part of the moraine on its right bank, cross the glacier, steering almost due West, to the foot of the cliffs of the peak called l'Evêque. Skirt the base of



THE MATTERHORN, FROM THE TOP OF THE COL DE VALPELLINE.

these cliffs, and presently sweep round to the South, and so arrive at the **Col de Collon** (3130 mètres, 10,269 feet), which is one of the easiest of the high snow-passes in this district. Time, top of Col de Valpelline to highest rocks, 1 h.; rocks to Col du Mont Brulé, 2 hs. 10 min.; Col to moraine, 1 h.; moraine to summit of Col de Collon, 90 min.; Col de Collon to Prerayen, 3 hours.

Prof. Forbes crossed the Col de Collon in 1842, and said, "the only *traveller* I am aware of as having passed here is M. Godefroy," but the pass was well known to the people of the country at that time, and was frequently used by smugglers. In descending towards the Arolla Glacier, Forbes' party came across the body of a man who had perished at the foot of Mont Collon, and lower down discovered remnants of two others. "A dark object was descried on the snow to our left, just under the precipices of Mont Collon. . . This proved to be the body of a man fully clothed, fallen with his head in the direction in which we were going. From the appearance of the body as it lay, it might have been presumed to be recent; but when it was raised, the head

and face were found to be in a state of frightful decay, and covered with blood, evidently arising from an incipient thaw, after having remained perhaps for a twelvemonth perfectly congealed. The clothes were quite entire and uninjured, and, being hard frozen, still protected the corpse beneath. It was evident that an unhappy peasant had been overtaken in a storm, probably of the previous year, and had lain there covered with snow during the whole winter and spring, and that we were now, in the month of August, the first travellers who had passed this way. The hands were gloved and in the pockets, in the attitude of a person maintaining the last glow of heat, and the body being extended on the snow, which was pretty steep, it appeared that he had been hurrying towards the valley when his strength was exhausted, and he lay simply as he fell. . . A very little farther on we found traces of another victim, probably of an earlier date;—some shreds of clothes, and fragments of a knapsack; but the body had disappeared. Still lower, the remains of the bones and skin of two chamois, and near them the complete bones of a man. The latter were arranged in a very singular manner, nearly the whole skeleton being there in detached bones, laid in order along the ice,—the skull lowest, next the arms and ribs, and finally the bones of the pelvis, legs, and feet, disposed along the glacier, so that the distance between the head and feet might be five yards." It was subsequently found that the body first discovered was that of a man who had started with eleven others to cross into Italy. Being overtaken by storm, they resolved to return; but three of the number, worn out by fatigue, dropped behind and perished.]

The Col d'Hérens (formerly called **Col d'Erin**), 11,418 feet, 3480 mètres, leading from Zermatt to the Val d'Hérens, is an old pass, rather frequently traversed during the season. Track is marked on the Valley of Zermatt Map. Prof. Forbes, who crossed it in 1842, said he proposed to call it the **Col d'Erin**, *as it had not yet received a name;* and remarked that Venetz wrote in 1833 that this pass was so dangerous that he had never known but one man who had accomplished it. "I first heard of it," said Forbes, "from a guide at Zermatt, Peter Damatter, who told me, in 1841, that he had passed it."

As a whole it is easy. When going from Zermatt, the route is the same as for the Col de Valpelline so far as the middle of the Stock Glacier. It then turns N.N.W., and crosses the ridge leading from the Tête Blanche to the Wandfluh. There is a small, rather steep, wall of rock and snow to ascend, at the base of which there is usually a small bergschrund. On the northern side of the pass the slopes are gentle. From Zermatt to Alpe Bricolla (Abricolla) reckon 10-11 hours. Thence to Evolena about 2¾ hours.

The **Col de Bertol**, leading from Zermatt to Arolla, is reached from the summit of the Col d'Hérens by steering W.N.W. across the upper part of the Glac. de Ferpècle and then across the Glac. du Mont Miné, towards the point marked 3507 upon the Map of the Valley of Zermatt. Turn to the south of this, towards the west, and descend from the Col to the Glac. d'Arolla by the left bank (S. side) of the Glac. de Bertol. Messrs. Moore and Walker, who traversed this pass in 1865 with Jakob Anderegg, took 14 hs. 10 min. from Zermatt to Arolla. A *cabane*, 11,231 feet, 3423 mètres, has been erected on the Col de Bertol at the expense of a member of the Neuchâtel section of the Swiss Alpine Club. It is said to be the most elevated *cabane* in the Swiss Alps.

Arolla, 6440 feet, 1962 mètres, attracts increasing numbers of visitors, and is a centre for many excursions. HOTEL DU MONT COLLON; KURHAUS. From Arolla one can get to Zermatt in about 12 hours, by descending the Val d'Hérens to Sion and then taking train.

Leave Arolla (on foot)	10 a.m.	
Arr. Evolena, and lunch	12.50 p.m.	
Leave do. (by Post-cart)	1.35	,,
Arr. Sion (do.)	5	,,

Leave do. (by train)	5.35 p.m.
Arr. Zermatt (do.)	9.40 ,,

The cost is 6 frs. 40 cts. per place in the Post-cart from Evolena to Sion, and 12 frs. 35 cts. 3rd cl. from Sion to Zermatt.

The **Col de la Dent Blanche** (originally called **Zinaljoch**), 11,483 feet, 3500 mètres, leading from Zermatt to Zinal and the Val d'Anniviers, which passes between the Dent Blanche and the Pointe de Zinal, was first crossed on Sept. 6, 1872, by Mr. T. H. Philpott, with Peter Knubel and Elie Petter. They took 7¾ hs. from Mountet to Zermatt. "Three hours to summit from Mountet. Nearly 2 hs. were taken descending on the right of the Schönbuhl Glacier to Stockje. Ascent and descent easy. The first part of south side much exposed to stones from Dent Blanche, and therefore had better be taken early . . . 2¾ hs. Stockje to Zermatt."—*Alpine Journal*, vol. vi, p. 437. The track is marked on the Valley of Zermatt Map. Confusion has been caused by changing the original name of this pass. It is quicker to go *viâ* Zmutt and the left bank of the glacier than by Staffel and Stockje.

The **Col Durand**, 11,398 feet, 3474 mètres, between the Pointe de Zinal and Mont Durand (Arbenhorn),[1] leading to the Val d'Anniviers, is one of the easier of the high snow-passes in this district. According to Conway's *Climber's Guide to the Central Pennine Alps*, the summit has been reached in 2 hs. from Mountet, and descent from the summit to Zermatt has been effected in 3 hours. When going from Zermatt over the Col Durand, pass through the village of Zmutt, and keep on the left bank of the Zmutt Valley.

The **Arbenjoch**, 11,975 feet, 3650 mètres, between Mont Durand (Arbenhorn) and the Ober Gabelhorn, leading from Zermatt to the Val d'Anniviers, is one of the loftiest passes to the W. of Zermatt, and one of the finest, from the Alpinist's point of view. Its passage was first effected on July 8, 1875, by Mr. W. E. Davidson, with Laurent Lanier (Courmayeur) and a porter from Vissoie. They left Zinal at 2.45 a.m., proposing to cross the Col Durand, but at the Roc noir changed their intention, and "turned to the left, bore diagonally across a snow plain, and passing beneath a range of enormous ice-cliffs, which rendered a direct approach to the Col impossible, arrived without difficulty at the foot of the N.W. face of the Gabelhorn, . . . passing upwards between two gigantic tiers of ice-cliffs, which were in a most unstable condition. The passage of the *séracs* was a work of much difficulty. . . It was not until 2 p.m. that we reached the plateau above the ice-fall, and we were then compelled, by the size and number of the crevasses, to bear to the left a long way out of our course until, at a point about 300 feet below the western arête of the Gabelhorn, we crossed the bergschrund which guards its N.W. face. The final slope was hard ice, and it cost us 1½ hs. of constant step-cutting to gain the ridge. . . The descent was by steep but easy rocks to the Arben Glacier, whence the route to Zermatt, which was reached at 8.45 p.m., presents no difficulty whatever. . . All the difficulties are on the Zinal side. . . Time from Zinal to the Col, 13 hs. actual walking; Col to Zermatt, 3 hs. 20 min. actual walking."—*Alpine Journal*, vol. vii, p. 321. The Ober Gabelhorn can be ascended from the Arbenjoch. See p. 150.

The **Wellenjoch** (about 12,200 feet) between the Ober Gabelhorn and the Wellenkuppe was first crossed by Mr. G. Ellis, with the guides Ulrich Almer and Alois Biner on July 24, 1902. The time occupied from the Trift Inn to the Mountet hut was 13¾ hs. This indicates that the pass cannot be put in competition with the next one. See *Alpine Journal*, vol. xxi, p. 265-6.

The **Triftjoch**, 11,614 feet, 3540 mètres, between the Trifthorn and Wellenkuppe, leading from Zermatt to the Val d'Anniviers, is reputed to be an old pass, and it is the most direct one that can be taken. Frequently used during the season. Route is marked on the Valley of Zermatt Map.

[1] This name is not given on the Valley of Zermatt Map. The peak is marked 3744.

The way from Zermatt leads up the Trift Gorge, passes the Trift inn and Triftkummen (see p. 146), and ascends for a considerable distance by a path on the crest of a moraine on the left bank of the Trift Glacier. Then there is a little piece of glacier to be traversed, which is separated by a small bergschrund from the final bit leading to the pass. This is a mixture of snow and rock.

The descent is at first by steep rocks, much broken up and not difficult. At the base of this cliff there is another small bergschrund; and, when this is left behind, a nearly straight course can be steered to the Mountet *cabane*, 9475 feet, 2888 mètres, at the southern foot of Besso. At this hut there is a guardian, from whom food can be purchased.

	h.	min.
Zermatt to summit of Triftjoch	4	45
Summit of Triftjoch to Mountet	2	
Mountet to Zinal	3	10
Zinal to Mountet	4	15
Mountet to summit of Triftjoch	3	
Summit of Triftjoch to Zermatt (moving briskly)	2	45

In re falling stones.—Mr. T. W. Hinchliff went over this pass in 1857, and said that, so far as he had been able to discover, it "had only been twice crossed in modern times." He dwelt in his account upon the risk from falling stones on the Zinal side, and since that time it has been well-known that they come down in such numbers and with such frequency as to be dangerous,—more particularly after the sun strikes the upper cliffs of the Trifthorn. He had halted for lunch, some distance from the base of the cliffs, "when," he said, "a booming sound, like the discharge of a gun far over our heads, made us all at once glance upwards to the top of the Trifthorn. Close to its craggy summit hung a cloud of dust, like dirty smoke, and in a few seconds another and a larger one burst forth several hundred feet lower. A glance through the telescope showed that a fall of rocks had commenced, and the fragments were leaping down from ledge to ledge in a series of cascades. Each block dashed off others at every point of contact, and the uproar became tremendous; thousands of fragments, making every variety of noise according to their size, and producing the effect of a fire of musketry and artillery combined, thundered downwards from so great a height that we waited anxiously for some considerable time to see them reach the snow-field below. As nearly as we could estimate the distance, we were 500 yards from the base of the rocks, so we thought that, come what might, we were in a tolerably secure position. At last we saw many of the blocks plunge into the snow after taking their last fearful leap; presently much larger fragments followed, taking proportionably larger bounds; the noise grew fiercer and fiercer, and huge blocks began to fall so near to us that we jumped to our feet, preparing to dodge them to the best of our ability. 'Look out!' cried some one, and we opened out right and left at the approach of a monster, evidently weighing many hundredweight, which was coming right at us like a huge shell fired from a mortar. It fell with a heavy thud not more than twenty feet from us, scattering lumps of snow into the circle where we had just been dining; but scarcely had we begun to recover from our astonishment when a still larger rock flew exactly over our heads to a distance of 200 yards beyond us. . . Even Cachat" [Zacharie Cachat, of Chamonix] "looked somewhat bewildered, and . . exclaimed 'Ah! si ma femme pouvait savoir où je suis à présent!'"—*Peaks, Passes and Glaciers*, 1st series.

A Tragedy on the Trift.—Two English ladies, Miss Sampson and Miss Growse, left the Riffelalp Hotel at 2 a.m. on Aug. 30, 1895, with Louis Carrel (Val Tournanche) and Anton Biener (Zermatt), intending to cross the Triftjoch on the same day! They went down to Zermatt, walked up to the Trift Hotel, and stopped to get provisions there. The people of the inn had not risen, delay occurred, and, in consequence, they arrived on the top of

the Pass somewhere about 10 a.m.—later than was advisable. However, they descended the cliff on the Mountet side all right, and were about to cross the small bergschrund at its base,—Carrel leading, followed by Miss Growse, then Miss Sampson, with Biener behind her. Carrel was just at the bergschrund, cutting steps. "All at once," said he, "I heard a great noise, and saw stones coming down. Said I to myself, 'We are all lost.' I shouted 'cachez-vous!'" a thing which it was impossible for them to do. Louis crouched down against the upper lip of the bergschrund, and was only struck by some small fragments. Miss Growse was rather severely bruised by the blows she received, but was not seriously hurt. Miss Sampson was hit in the back, and so was Biener. A flask he carried was crushed. "How large was the stone which struck Miss Sampson, Louis?" "I am not sure," he said, "one couldn't see clearly, but I think about as large as this,"—indicating a cube of about 16 inches. "What did you do then?" "She could not walk, and I took her on my back; but more steps had to be cut, and we got along slowly." "You cut with one hand, and held her on with the other?" "Yes." "Had she any strength?" "Yes, she hung on to me, with her hands over my shoulders." "Could she talk?" "Yes, but I couldn't understand what she said, for she spoke in English." "Go on with the story." "I carried her until we were out of reach of falling stones, and then laid her on the snow, on my coat and other things. She was then alive." "How long was this after the accident?" "About an hour. Just then, the guardian of the Mountet hut came up, with two of his men. He had seen that there was something wrong, and hurried across the glacier to meet us. 'She is dying,' he said to me. It was so. She turned pale, her eyes closed, and it was all over."

Miss Sampson was buried at Zermatt on Sept. 2 (see p. 132). An unusual degree of sympathy was manifested by the Zermatters upon this occasion.

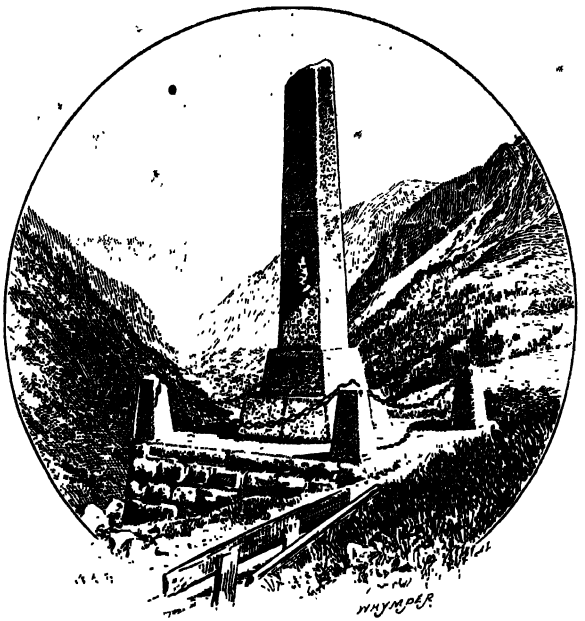
The **Moming Pass**, 12,444 feet, 3793 mètres, which goes between the Zinal Rothhorn and the Schallhorn (Schallihorn), is another way which may be taken from Zermatt to Zinal and the Val d'Anniviers. Circuitous. Not recommended. See *Scrambles amongst the Alps*, chap. xii.

Zinal, 5505 feet, 1678 mètres; **Hotels**—HOTEL DES DIABLONS; HOTEL DURAND (the oldest); HOTEL DU BESSO; is growing in public estimation, and many persons wish to go there from Zermatt. The easiest, quickest, and most economical way is to take train from Zermatt to Sierre; telegraph beforehand to have a char waiting at the Railway Station; ride to **Vissoye**, 3980 feet, 1213 mètres, HOTEL-PENSION D'ANNIVIERS; and walk from Vissoye to Zinal. It can be done in about 9 hours, at a cost of 28 francs. The Hotels at Zinal are all under one management.

The carriage-road from Sierre to Vissoye makes a large detour up the Valley of the Rhone. A *pedestrian* should not at first follow this road, but should go from Sierre to Chippis, whence a steep path leads to the village of Nioue. From that place, adhere to the carriage-road. Walking-times will be about these.

	h.	min		h.	min.
Sierre to Chippis . .		27	Zinal to Ayer . . .		55
Chippis to Nioue . .		45	Ayer to Vissoye . . .	1	
Nioue to Vissoye . .	1	50	Vissoye to Nioue . . .	1	35
Vissoye to Ayer . .	1	10	Nioue to Chippis . . .		20
Ayer to Zinal . .	1	20	Chippis to Sierre . . .		28
Total . .	5	32	Total . . .	4	18

This brings us to the end of the Passes to the South and West of Zermatt. For others, situated to its East and South-east, it is more convenient to start from the Riffelalp Hotel. See chap. x.



MONUMENT TO T. W. HINCHLIFF.

CHAPTER X.

EXCURSIONS FROM THE RIFFELALP AND RIFFELBERG HOTELS.

EARLY ATTEMPTS TO ASCEND MONTE ROSA—THE FIRST ASCENT OF MONTE ROSA—THE HÖCHSTE SPITZE (DUFOURSPITZE)—*CABANE* BÉTEMPS—WINTER ASCENT OF MONTE ROSA—THE NORD END—THE LYSKAMM (SILBERBAST)—DEATH OF MR. CHESTER—LOSS OF MESSRS. LEWIS AND PATERSON—ANOTHER SNOW-CORNICE ACCIDENT—CASTOR AND POLLUX (ZWILLINGE, OR THE TWINS)—THE BREITHORN FROM THE NORTH—A TOUR ROUND THE BREITHORN—CIMA DI JAZZI—THE STRAHLHORN—PASSES—THE ADLERPASS—SCHWARZBERG WEISSTHOR—NEW WEISSTHOR—OLD WEISSTHOR—SESIAJOCH—LYSJOCH—FELIKJOCH—ZWILLINGSPASS—SCHWARZTHOR.

IN a certain sense, excursions from the Riffelalp Hotel (or from the Riffelhaus) are also excursions from Zermatt; but most persons will find it to their comfort to use the Riffelalp Hotel as a starting-point for those which are mentioned in this chapter. There are, besides, a number of little excursions that can be made in the vicinity of the Hotel, which has the advantages of being free from external noises and nuisances, and of being surrounded by ground (partly open and partly tree-covered) over which the tourist can roam at

pleasure. A path to the Findelen Valley starts at the back of the Hotel (by the side of which there is a monument erected to the late Mr. T. W. Hinchliff), and various other erratic paths, leading nowhere in particular, will be found in the same direction. It goes without saying that excursions to the Gornergrat or the Findelen Valley, and ascents of Gugel and the Riffelhorn are made from the Riffelalp Hotel (or from the Riffelhaus) with greater facility than from Zermatt itself.

The Ascent of Monte Rosa, 15,217 feet, 4638 mètres, has become extremely popular. As no records are preserved, it is impossible to say how many ascents are made. They are probably much more numerous than those of Mont Blanc. The first ascent of the highest point was effected by the Messrs. Smyth in 1855. See pages 15, 17.



THE RIFFELALP HOTEL.

Prior to their success several efforts had been made to get to the top *viâ* the Silbersattel, the *depression* between the Nord End and Monte Rosa proper (or Dufourspitze, as it is now termed by the Swiss). The height of this Col is 14,731 feet, and the difference of level between it and the very highest point is only 486 feet, but this small distance proved too much for the early explorers.

It is stated that Prof. Ulrich got to the Silbersattel in 1848; and again, with G. Studer, in 1849. In 1851, Hermann and Adolph Schlagintweit (who afterwards became known as Himalayan travellers) appear to have mounted to some height *above* the Silbersattel, and in

1854, an Englishman, Mr. S. D. Bird,[1] is said to have climbed within a hundred feet of the top,—which is, perhaps, doubtful. Shortly afterwards, Messrs. Smyth made the first ascent of the Strahlhorn, and the majestic appearance of Monte Rosa when seen from that direction induced them to make the attempts which followed. Their first effort was in Aug. 1854, and the next upon the succeeding Sept. 1. By the courtesy of Canon Smyth I am able to give the following extracts from an account which was written shortly afterwards.

ASCENT OF MONTE ROSA. Friday, Sept. 1, 1854.

"The following Ascent was made by three brothers—Captain Edmund Smyth, 13th Bengal N.I.; James Grenville Smyth, Vicar of N. & S. Elkington, Lincolnshire; Christopher Smyth, Rector of Woodford, Northampton.

After an unsuccessful attempt to ascend this beautiful mountain, owing to cloudy weather,[2] we determined to make another trial, and accordingly, after an early breakfast, started at 2 a.m. from the Hotel de Riffel, ourselves three in number, with four guides, one of whom carried a ladder, and a porter to carry part of the baggage for the first 3 or 4 hours. One of these guides was Ulrich Lauener of Lauterbrunnen,[3] a man whose value we had learnt by experience, having crossed with him some of the highest and most difficult passes in the Alps,—the rest were Zermatt guides. . . .

Our path for the first 40 minutes lay along the West side of the Riffel, leaving the Riffelhorn on the right,—from this point is obtained the first view of the upper part of the Gorner Glacier. Here our path turned to the left, passing along the side of a steep slope, inclined at an angle occasionally of 60°. Above us was the path leading to the Gornergrat, about 700 feet below us was the glacier. The path continued in the same direction, keeping along the side of, and gradually descending towards the glacier, which we reached in about 2¾ hours from the Hotel. . . We were longer about this part of our journey than we should otherwise have been, for it was still too dark to see clearly, and we had nothing but one tallow candle to help us. Fortunately, on arriving at the glacier, the twilight was sufficiently advanced for us. Here, as may be supposed, all traces of a path ceased. Our way now lay directly across the glacier towards the rocks at the foot of Monte Rosa, leaving what is called in the maps the Gorner See on the left. This See or Lake no longer exists. It has been drained since last year by new crevasses in the Glacier. The site of the Lake is marked by a large hollow in the ice of some acres in extent. . . It takes an hour to cross this enormous glacier, which stretches from the Old Weiss Thor Pass to within about 2 miles of Zermatt.

We arrived at the opposite side in about 3 hours from the Hotel, during which time we had advanced very little in actual height. Now, however, the ascent began in earnest, at first over the rocks, which was comparatively easy work. Soon we had again to walk upon the glacier by the side of the rocks. Here it was more crevassed, and in consequence greater care was required. The danger in walking over glaciers consists not so much in what you can see as in what you cannot see. . . It is seldom the guides are deceived. A good guide will go on steadily until he comes to the treacherous places, which are

[1] There is a letter from Mr. Bird, upon his ascent, in the *Illustrated London News*, vol. xxv, p. 422.

[2] "The Riffelberg Hotel, a poor shanty then, had just been opened. Having previously surveyed our ground, we started in the afternoon, and slept under the slight shelter of some rocks a few hundred feet above the Gorner Glacier, on the side of Monte Rosa, with sheep-skins to keep us warm. Beware of sheep-skins!! I remember that night well enough, when we had hardly room to scratch ourselves, fitting into each other like spoons! The next morning we made for the Sattel between the highest point and the Nord End, but finally a change in the weather, with a south wind drove us back to the friendly Riffel to wait for better times."—*Letter from the Rev. Christopher Smyth.*

[3] Two others were Johann and Mathias zum Taugwald.—*E. W.*

generally known by the increased whiteness of the snow. Here he digs in his bâton, finds out the breadth of the crevasse, and if practicable leaps across; or, if not, walks along the side until he comes to a practicable place. Sometimes he divides his weight by crawling on his hands and knees, while the rest cautiously follow in his footsteps. This was our manner of proceeding for 5 hours, occasionally stopping to rest, or eat, or to admire the increasing beauty of the scenery, as we gradually rose to the level of all the surrounding mountains.

On approaching the summit the crevasses became larger and more picturesque, the huge masses of ice stood out in bold relief far above us, on one side. . . One of these crevasses stretched completely across our way, with no means of passing except by a narrow bridge of snow. Fortunately, this natural bridge was strong enough to bear our weight; we all crossed in safety, and in due time arrived at the ridge between the Northern and the Highest peaks. This spot I believe to be about 14,800 feet above the sea. Here we sat down on our waterproofs for about 20 minutes to rest ourselves, and to enjoy the view, before proceeding to the most difficult part of our expedition.

The Highest Peak of Monte Rosa consists of a long ridge of rock partially covered with snow and ice. Very narrow at the top, and so steep as to be almost inaccessible,—indeed I should imagine it was wholly inaccessible to any but first-rate guides. We were fortunate enough in having as good a guide with us as any in Switzerland. We had brought up the ladder from below with a view of climbing this rock, but it was useless. Even our bâtons were of no use to us here. From this point to the top it was a scramble up steep rock covered with ice.

On making a start we were each of us attached by a short rope to a guide, a most necessary precaution, as a single slip might (and probably would) have been fatal. The first part of this ascent being less steep was the easiest, and by treading in each other's footsteps we managed to get along pretty easily, but this did not last long. We soon came to the steeper rocks, and then every muscle in the body was brought into action. . . Here our guides left us for half an hour while they cut steps in the ice.

This was the most disagreeable part of all. As long as we were in the sunshine or in exercise we felt pretty well, but now sitting, or rather half-reclining, in the shade, with nothing but a rock covered with ice to rest upon, to which I suppose may be added the rarefaction of the air, all these things combined brought on excessive faintness. The feeling was one of entire helplessness, as if the proper place for one were a comfortable bed, where one could lie down and go to sleep. . . Fortunately, this feeling did not last long. A little cognac soon restored us, and when the guides were ready for us, we were ready to continue our scramble. The remainder of the journey to the top was so steep and so slippery that we had to be helped up the whole distance, notwithstanding the steps cut in the ice.

I might mention here that the guides are generally more careful of travellers than travellers are of themselves, their fault (if fault it can be called) is *over-caution*, they *will* help you when you feel you don't want help. . . On the present occasion there was good reason for the greatest caution; for, although we were all three of us accustomed to climbing, yet the scrambling up a precipice over blocks of stone covered with ice was quite a new thing. The three ropes by which we had been before attached to three of our guides were now fastened together, and one by one we were helped up the rocks by a guide who sat above us, in this way we proceeded the rest of the distance to the summit.

I said the highest peak of Monte Rosa consisted of a long narrow ridge. Upon this ridge there are three small peaks of nearly equal height,—the middle one of the three being a few feet higher than the others. The point at which we were now arrived was the most Eastern, had time and weather allowed us, we should have liked to have proceeded to the other two points, but as it was now 12 o'clock, and the clouds were beginning to gather all round us, we thought it inadvisable to venture, especially as the road appeared to be



MONTE ROSA, FROM THE GORNERGRAT.

more dangerous than anything we had yet encountered, owing to the narrowness of the ridge and the quantity of black ice upon the rocks. We stayed at the summit about half an hour during which time our guides amused themselves by building a cairn and planting our flag.[1]

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We now began to think of returning. Again the ropes were brought into requisition, and we were one by one let down a short distance at a time, until we were beyond the most dangerous parts. We then clambered down as best we could, until we arrived at the foot of the peak in safety. It took us an hour and a half to reach the summit from this point, and nearly the same time to return, although the distance was really so small.

The descent from here was comparatively easy. We went over the snow very rapidly, performing in two hours what had taken five in ascending. The same care, however, was required in crossing the crevasses,—but with this exception the descent was easy. In two hours we reached the rocks at the foot of the mountain. We now crossed the Gorner Glacier, and in an hour reached the path we had used in the morning. We arrived at the Hotel de Riffel at ¼ past 7, having been 17 hours on the expedition."

It is obvious from this relation that Messrs. Smyth were aware that they had not reached the very highest point, as it is mentioned explicitly that there were three peaks of nearly equal height, the middle one being a few feet higher than the others, and that they went upon *the most Eastern one.*

In July, 1855, Messrs. Christopher and Grenville Smyth were again at Zermatt, and amongst other things ascended the Breithorn and Petit Mont Cervin, with some friends.

"Two days after this, as some of the party wished to ascend Monte Rosa, and as Chris. and I only looked upon the expedition as rather a long day's walk, we determined to join them. Accordingly we were called at 11 p.m.!! on Tuesday, July 31, breakfasted about ¼ to 12, and started (5 of us with 4 guides) at ¼ past 12. The moon was about full and the night most beautiful. We went over nearly the same ground as last year, until we arrived about two hours from the top. Here the glacier by which we formerly ascended was so broken that we were obliged to turn to the right and began to ascend the highest peak from the West instead of from the East. The snow was very steep and in many places had become ice, so that more than a hundred steps had to be cut. . . Whilst steps were being made, after about an hour's halt, we started again,—the wind was still very cold, though not violent, and the sun had some little power. There were now two steep ridges of snow to mount, almost every step of which had to be cut, after which there was about half an hour's climbing up and down steep rocks, and then we stood the first human beings upon the very highest point of the highest peak of this glorious mountain. . . We descended in safety, and much more quickly than we went up, sliding and running down the snow which had taken so long a time in ascending, and arrived at the Hotel not very late in the afternoon."[2]

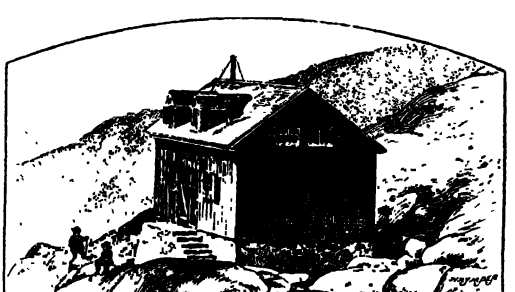
From this account it appears that the adoption of the new way was partly accidental rather than intentional, and this arose from the glacier by which they had formerly ascended being so broken

[1] "Having no flag, my brother, Col. Smyth, sacrificed his alpenstock and one of two shirts he was wearing. Apropos of this banner. An Englishman ascending shortly afterwards by the same route cut from the shirt the portion on which my brother's name was marked, and one day at a dinner-table was relating the story of his climb, and of the trophy he had brought down with him, and had then in his possession. My brother overheard the conversation, and asked him to produce it, which he did at once."—*Letter from the Rev. Christopher Smyth.*

[2] Extract from a letter from Canon Smyth, dated Aug. 9, 1855. Ulrich Lauener was again the leading guide.

that they "were *obliged* to turn to the right" and so began to ascend the highest peak from the West. The Rev. Christopher Smyth, however, informs me that they were determined to try the new way from doubting the practicability of the old one, and that when they made off for the ridge the guides lagged behind and moved on slowly towards the Sattel. "Nor did they rejoin us till they saw us begin the ascent of the dome-shaped slope of ice and snow which leads to the final rocks. Perceiving that we were prepared to go on without them, and that our success without them might be prejudicial to their prestige as guides, they once more took the lead; but were not very useful, nor do I think much credit was due to them.[1] We did not rope, nor was the helping hand needed. I think Ulrich Lauener cut a few steps. He was head of the party, and reached the top first."

The route taken by Messrs. Birkbeck, Hudson, Stevenson and Smyth on Aug. 1, 1855, is the route which is followed still, so far as the *upper* part of the mountain is concerned. It goes along the ridge which leads due W. from the highest point. See Map of the Valley of Zermatt. But at the commencement it differs from the way they took. It now leads over the rocks called Untere Plattje. See Illustration on p. 169, and the View from the Gornergrat at the end of the volume. The *cabane* Bétemps, built upon the western side of these rocks, is now commonly used as a starting-point. This little place (completed in 1894) cost nearly £600 to erect, towards which the Swiss Alpine Club contributed 11,792 francs! It has a guardian, from whom food can be obtained. The authorized *tarif* for provisions, etc., should be posted up in the *cabane* and in the Hotels of Zermatt.



THE CABANE BÉTEMPS.

The highest point of Monte Rosa (or Monte Rosa proper) has also been ascended from the South (*Alpine Journal*, vol. vii, p. 107); and by its S.E. ridge (*A. J.* vol. viii, p. 339). "Our route is recommended to future climbers, who do not mind rotten rocks, plenty of falling stones, and but little good handhold or footing during three and a half hours." It has been ascended, too, from Macugnaga, by the E. face. Although this latter is a very fine excursion, those who undertake it should not conceal from themselves that it is a hazardous one (*A. J.* vol. vi, pp. 91, 232-44).

[1] The Rev. E. W. Stevenson writes much to the same effect. "On arrival at the summit," he says, "the guide who had been cutting the steps" (Lauener) "was with us; one came up some time afterwards, and one never came up at all."

The highest point and the Nord End in one day.—On Aug. 10, 1878, Messrs. W. Penhall and G. Scriven, with F. Imseng and P. J. Truffer, and the Rev. F. F. Wethered with U. Almer and F. Andermatten, combined the ascent of the Nord End and the highest point. The first four named followed the usual Monte Rosa route to a little above Auf'm Felsen, and bearing away to the left took to the rocks of the Nord End. Descending to the Silber Sattel, they remounted to the highest point. Mr. Wethered's party struck to the left for the Nord End rocks at a different point to that selected by the others. Both parties reached the highest point together.

A Winter ascent of Monte Rosa.—Signor Vittorio Sella camped under canvas on the moraine of the Grenz Glacier on Jan. 25, 1884, with Joseph and Daniel Maquignaz (Val Tournanche). Starting next morning at 4 a.m., they gained the summit at 1.30 p.m. Up to the height of 3700 mètres (12,139 feet), the snow was soft and powdery. Higher up it was harder. The camp was regained at 5.30 p.m. On the third day they reached Zermatt *viâ* the Gornergrat and Riffel. Temperature on the summit was −16° C., and the minimum observed during the expedition was −17° C.

Accidents.—A fatal accident of a vulgar type occurred upon Monte Rosa on July 27, 1865. Two Englishmen, with three guides and two porters, started to make the ascent soon after the fall of a large amount of snow; and when near the Saddle (close to the top) started an avalanche, and were all more or less buried in it, except two of the guides. One porter was smothered. On Aug. 8, 1881, Sig. Marinelli, with Ferdinand Imseng and B. Pedranzini, attempted to ascend Monte Rosa by its E. face, and, getting in the track of an avalanche, were all killed. Avalanches of sorts fall frequently on that side.

The **Nord End**, 15,132 feet, 4612 mètres, the second highest peak of Monte Rosa, was ascended in 1861 (date not recorded) by Mr. Edward North Buxton, Sir T. Fowell Buxton, and Mr. J. J. Cowell, with Michel Payot and other guides. See *Peaks, Passes and Glaciers*, 2nd series, vol. i, pp. 412-22.

The positions and elevations of the lower peaks of Monte Rosa (Jägerhorn, Balmenhorn, Ludwigshöhe, Parrotspitze, Signalkuppe, and Zumsteinspitze) are given in Appendix E.

The **Lyskamm (Silberbast)**,[1] 14,889 feet, 4538 mètres, is exceeded in elevation by mountains in the Zermatt district only by Monte Rosa and the Dom. It forms the most prominent object seen from the Gornergrat, and looks its best from 9.30 to 11 a.m. The first ascent was made on Aug. 19, 1861, by the party whose names are given on p. 18, led by Peter Perren (Perrn).[2] The course was for the greater part of the way the same as that which leads to the Lysjoch (up the Grenz Glacier, formerly called the Monte Rosa Glacier), but, before reaching the Col, turned off to the right, up 'a rather stiffish snow-slope,' to the ridge leading E.S.E. from the summit. When the crest of this was reached, they doubled back (*i.e.* turned to the right), and followed the crest or *arête* of the ridge to the top. Perren went up "in magnificent style, kicking and cutting steps with a skill and rapidity which I have seldom seen

[1] "The old name 'Silberbast' for the Lyskamm has almost been forgotten. . . Yet the word 'Bast' must be familiar to many visitors to Zermatt, for it is applied in the local dialect to the wooden saddles of the pack-mules. It does not require a great deal of imagination to suppose that the name 'Silberbast' was given to the Lyskamm because, seen from the Gornergrat, it has the appearance of a huge snowy pack-saddle, and the name is therefore very appropriate."—*Herr A. Lorria.*

[2] Not the Peter Perrn mentioned on p. 151.

equalled, stopping only now and then to shout down to us a hoarse query as to the state of the snow above him, lest he should unwarily tread upon an overhanging cornice."—*Peaks, Passes and Glaciers*, 2nd series, vol. i, pp. 389-90. 17 hs. 20 min. were occupied from the Riffel to the top and back. The Lyskamm has been ascended from several other directions, but the route generally taken from the Riffelalp Hotel is substantially that which was first adopted. Though the ordinary way up the Lyskamm cannot be accounted difficult, it affords various possibilities, some of which will be illustrated presently.

Winter Ascents of the Lyskamm.—Signor Vittorio Sella, the accomplished photographer, reached the top from the Italian side on Mar. 22, 1885, and this was again done by two other Italians on Mar. 4, 1889.

Co-operation.—In 1866, Messrs. F. Morshead and H. Walker, with Melchior and Jakob Anderegg, and Mr. J. H. Kitson with Christian Almer, left the Riffel together for the Lyskamm. Separating on the Gorner Glacier, the former gentlemen ascended by the Zwillinge Glacier and the Western *arête*, arriving at the summit at 10.15; and Mr. Kitson ascended by the Eastern *arête*, arriving at 9.35. Thus the two parties were together on the top, and descending each by the *arête* by which the other had ascended, they met on the Gorner Glacier again.—*Alpine Journal*, vol. ii, p. 414.

A Tour of the Lyskamm and its Ascent combined.—In July, 1867, Messrs. C. E. Mathews and F. Morshead, with Christian Almer, left the Riffel at midnight; ascended to the top of the Felikjoch by a few minutes past 5; bore round to the left on to the western part of the Lys Glacier, and made for the rocks running South from the Lyskamm. These were ascended. At 10.15 a.m. they were on the summit; then descended to the Lysjoch, and got back to the Riffel at 6 p.m.

Death of Mr. Henry Chester (1869).—At 1 a.m. on Sept. 15, 1869, Mr. Chester (a London solicitor) left the Riffel with two guides, to ascend the Lyskamm. A little before 10 on the evening of the same day the guides returned with the news that he was dead. They stated that they had reached the summit at 2.45 p.m., and had almost immediately commenced the descent. "Mr. Chester, being very tired, had stumbled several times, but he had got to the end of the narrow part of the *arête* without an actual fall. At this point he insisted upon going" to look for traces of a dog which he had taken with him, and which had disappeared during the ascent. In going, he fell forwards on his face; the guides were not alert at the moment, and were dragged off their feet by his fall. "The whole three had immediately bounded over an ice-cliff, and at last, after slipping down a slope estimated by the guides as being some eight hundred to a thousand feet in height, had lodged on the Grenz Glacier beneath." This was the account given by the two guides.

At 3 a.m. on the following morning four Englishmen, Mr. W. E. Hall (barrister), the late Right Hon. Lord Justice Rigby, Mr. Porter (late Master of St. Peter's Coll., Cambridge), and Mr. Fowler, started with ten men for the scene of the accident, and found Mr. Chester dead, with his neck broken. The tracks on the snow, and other circumstances, led to the belief that the story of the guides was, at least in part, an invention. An official investigation of the usual character was subsequently held at Zermatt. As the result of this was not made known, Mr. Hall communicated a paper to the Alpine Club upon the subject, in which he said, "M. Clemenz" (who held the investigation) "promised to me—and when Mr. Chester's brother arrived at Zermatt to him also—that his decision and the grounds of it should be fully communicated to us. For a long time expectation that M. Clemenz would fulfil his promise naturally and necessarily closed our mouths. But when more than six months have gone by, and when a date, fixed after several letters as that in which the decision should arrive in England has been passed by nearly eight weeks, it becomes necessary, if any good effect

is to be produced during the coming summer by the publication of the truth, that the dilatory courtesy of M. Clemenz should no longer be waited for. . . I am content that my action should be sufficiently justified by the fact that like promises were made after the accident on the Matterhorn, and that they were never fulfilled."[1] Mr. Hall concluded by saying that, whatever might be the motive for M. Clemenz's silence, the effect of it was unfortunate on the Guides of Zermatt, and, in that opinion, I entirely concur.

The death of Mr. Chester remains a mystery. There *was* a dog with the party, but it is by no means certain that Mr. Chester went to look after it, or that it had anything to do with his death.

Three Guides and two Tourists perish by breaking through a snow-cornice (1877).—"On Sept. 6, 1877, Messrs. William Arnold Lewis and Noel H. Paterson, with Niklaus, Johann and Peter Joseph Knubel" (of St. Nicholas) "left the Riffelhaus at 2 a.m., to make the ascent of the Lyskamm. As they did not return that night, Mr. J. A. Carfrae, accompanied by Peter Knubel, Joseph Imboden and J. J. Truffer" (of St. Nicholas) "started the following morning at 6.30 in search. They followed the tracks of Mr. Lewis's party to the foot of the *arête* leading down from the summit of the mountain towards the Lysjoch, and there found two knapsacks which had been left by them at this spot on the preceding day, before they began the final climb. This circumstance caused them at once to fear that an accident had occurred, and after skirting the lower slopes on the Italian side for nearly an hour, they reached a point from which they saw the whole of the party lying upon the snow at some distance beneath them. Being unable to reach the bodies from this point, they retraced their steps, and after making a slight detour arrived at the spot. The cause of the accident was at once apparent: a snow-cornice on the *arête* about 500 feet below the summit of the mountain had given way under the weight of the party, and they had fallen some 1200 feet on to the glacier beneath. The whole of the party had received such injuries that death must have been instantaneous in every case. Portions of the broken cornice were lying round the bodies, and the line of their fall could be traced by two axes belonging to members of the party, one of which was found upon the ice slope some 300 feet above, and the other upon rocks still higher up. . . Messrs. Lewis and Paterson were buried in the English Churchyard at Zermatt, on the afternoon of the 10th." (See p. 132.)

"The cornice had broken away in two places, leaving some 40 feet in the middle still adhering to the mountain. The length of the parts which broke away was, perhaps, 40 feet on each side of the remaining portion. The distance of the fall was estimated at from 1200 to 1500 feet. The bodies, from the nature of the injuries they had received, had evidently fallen upon their heads on the rocks, and then, in one great bound, had reached almost the spot where they were found."—*Alpine Journal*, vol. viii, pp. 346-7.

The Editor of the *Alpine Journal* remarked that "at Zermatt it may be believed no warning" (in respect to snow-cornices) "will be wanted for many years." History, however, repeats itself.

Two Guides and a Tourist perish by breaking through a snow-cornice (1896).—On Sept. 6, 1896, Dr. Max Günther left the Bétemps *cabane* at 4 a.m., with Roman Imboden (St. Nicholas) and Peter Joseph Ruppen (Balen, Saas Thal), for an ascent of the Lyskamm. They were accompanied as far as the Lysjoch by another German with his guide. The two latter went towards the Ludwigshöhe to watch the ascent of the others, who left the Lysjoch soon after 9 a.m. At 10.30 the roar of an avalanche was heard, and a cloud of snow was seen blowing from the ridge of the Lyskamm. Upon proceeding to a point where the Italian side of the mountain could be inspected, the bodies of Dr. Günther and his guides could be seen lying on the snow at the base of a pre-

[1] See note to p. 70.

cipice about 1500 feet in height. They had broken through a snow-cornice, and the hole made in it was visible from below.—*Alpine Journal*, vol. xviii, p. 269.

Castor and Pollux (Zwillinge or the Twins) are overshadowed by the Lyskamm and Breithorn. They can both be bagged in one day from the Zwillingspass. **Castor**, 13,878 feet, 4230 mètres, was ascended by Messrs. W. Mathews and F. W. Jacomb with Michel-Auguste Croz and J. B. Croz, on Aug. 23, 1861, in 1 h. from the Zwillingspass; and **Pollux**, 13,422 feet, 4094 mètres, is said to have been first ascended by Mons. Jules Jacot in 1864, from the Schwarzthor.

The Breithorn from the North.—On the 15th Sept. 1869, Mr. R. Fowler, with Peter Knubel and G. Ruppen, went up the Breithorn from the North,—going *viâ* the slopes called Triftje, and then ascending partly by the Breithorn Glacier and a small glacier above which feeds it, finally struck the summit-ridge to the E. of the summit. Descent was effected by the ordinary route. From the Riffelhaus to the top and back occupied 12½ hours.

The Breithorn is sometimes ascended from the Riffelhaus or Riffelalp Hotel by crossing the Gorner Glacier, and taking up the ordinary route at Gandeck; but it is best to sleep at and to start from the inn on the top of the Theodule. See p. 154.

Descent of the Northern side of the Breithorn.—On Aug. 16, 1902, Mr. W. E. Davidson, with Joseph Pollinger and Julius Lochmatter, starting from Gandeck, went to the summit of the Breithorn by the ordinary route, and then descended its Northern side to the Riffelalp. From the top to the hotel occupied 6 hs., ex. halts.

A Tour round the Breithorn.—On July 21, 1866, Mr. S. Winkworth with J. B. Croz and Peter Perren made a tour round the Breithorn from the Riffelhaus to Zermatt. After crossing the Gorner Glacier, they ascended the Schwärze Glacier, and went over the Schwarzthor; then turned to the right, still ascending, to cross a snow-ridge running southwards from the Breithorn. They then passed along the southern face of the mountain nearly on a level, though ascending somewhat to a second ridge, which was the highest point reached,—perhaps 400 feet higher than the Schwarzthor. Descending from this, they joined the ordinary route for the Breithorn *viâ* the Theodule, and returned by the Theodule to Zermatt. Twelve hours were occupied, ex. halts.

The walk to the **Cima di Jazzi**, 12,526 feet, 3818 mètres, is one of the most popular excursions made from the Riffelhaus or the Riffelalp Hotel. For most of the way it is the same as the route for the New Weissthor. Several variations on the route may be made.

1. By the (rough) path from the Riffelalp Hotel which passes to the W. of the Riffelhorn, and descends on the Gorner Glacier. This gives a good deal of glacier. 2. By the (rough) path which descends directly upon the Gorner Glacier on the E. of the Riffelhorn. 3. By the path which passes between the Riffelhorn and Gornergrat and skirts the base of the latter. This is the most usual way, and it is marked on the Map of the Valley of Zermatt. 4. By a path descending to the Gorner Glacier from the top of the Gornergrat.

Between Stockknubel and the Cima there are many concealed crevasses, and rope should always be employed. Early in the season there are concealed crevasses *lower* down the glacier than Stockknubel. The slopes of the Cima are gentle upon the western side, but on the Italian side they descend precipitously. "Travellers are strongly cautioned against approaching too close to the verge, as the cap of frozen snow that covers the summit usually forms a cornice projecting several feet from the rock, and is liable, every now and then, to break away and fall some thousands of feet down towards the Macugnaga Glacier."—*Mr. John Ball.* The view on the Italian side is very extensive. To have the best chance of seeing it, and for general comfort, *start early.*

The **Strahlhorn**, 13,750 feet, 4191 mètres, was ascended in August, 1854 (date not recorded), by Capt. E. Smyth, the Rev. J. G. Smyth, and the Rev. C. Smyth, with 'the landlord of the Hotel at Saas' (presumably Franz Andermatten), from the Adlerpass. The ascent ordinarily presents no difficulties on the Saas side, and on that of Zermatt the only point which requires labour is the rather steep bank of snow just before arriving at the summit of the pass.

There are nine **Passes** leading to the E., S.E. and S. out of the basin of the Gorner Glacier, for which the Riffelalp Hotel is a natural starting-point. Though interesting as glacier-excursions, they are, however, of little utility as *passes*. For *tarif* see Appendix D.

The **Adlerpass**, 12,461 feet, 3798 mètres, leading between the Strahlhorn and Rimpfischhorn to the Valley of Saas, is reputed to be an old pass. Track is marked on the Map of the Valley of Zermatt. The **Schwarzberg Weissthor**, 11,811 feet, 3600 mètres, leading between the Strahlhorn and the Cima di Roffel (Rofel) is perhaps the easiest way of getting into the Valley of Saas out of the basin of the Gorner Glacier. There are two ways to it (both marked on the Map), one by the Findelen Glacier, and the other round the southern side of the Gornergrat, for most of the way identical with the routes to the Cima di Jazzi and the New Weissthor. This latter way is the easier of the two.

The **New Weissthor**, 11,811 feet, 3600 mètres, between the Cima di Roffel (Rofel) and the Cima di Jazzi, leading to the Val Anzasca, is one of the most practical of the passes going out of the basin of the Gorner Glacier, and is frequently crossed during the season. The route is the same as for the Cima di Jazzi so far as the foot of the Cima. It then bears away to the left, and arrives at the summit of the pass by going over what appears to be an innocent snow-field. There are concealed crevasses close up to the edge of the cliff overlooking the Italian side, and the rope should on no account be cast off before the rocks are reached. For track see Map of the Valley of Zermatt. The precipice above the Val Anzasca is startlingly abrupt. The rocks are good, but very steep. At the foot of the steepest part there is the **cabane Eugenio Sella**. Below it, for a good part of the way, the route leads down ordinary slopes. Grand view of the Macugnaga Glacier and of Monte Rosa towering above, on arriving at the head of the Val Anzasca. After this, it is still 5 kils. to Macugnaga. Hotels. HOTEL MONTE MORO; HOTEL MONTE ROSA. In crossing from the side of Zermatt, reckon 6 to 6½ hs. from the Riffelhaus (halts included) to the top of the pass; 1 h. 35 min. from the top to the *cabane* Eugenio Sella; and 2¼ to 2½ hs. thence to Macugnaga.

In a recently-published work, the author mentions the Weissthor as one of the passes over which he had 'strolled.' It may be said roundly that no one has ever strolled across the New Weissthor. If the writer crossed the pass *alone* (as he leads one to believe) he did a foolish thing. Untrue statements relating to the Weissthor do no harm to those who are acquainted with the pass; but they are likely to be mischievous with those who are *not*, and especially with persons who, for the sake of economy, desire to dispense with the services of Guides. The best of the Val Anzasca guides prefer descending to Stalden and going over the Monte Moro Pass to crossing the New Weissthor *alone*.

On July 28, 1894, a German (G. A. Meyer), "despite all remonstrances, persisted in going quite alone" (from the E. Sella hut towards Zermatt). "He followed a guided party for some distance, and when they were on the pass was seen by them on a ridge below. . . He was missed and searched for. His body was found four days later on the glacier, at the foot of a rock precipice."—*A. J.*, vol. xvii, p. 268. This occurred on the Italian side, where a decent mountaineer *may* go alone, without imprudence.

The **Old Weissthor**, 11,733 feet, 3576 mètres, between the Cima di Jazzi and the Fillarhorn, also leads into the Val Anzasca. There are several variations. Not recommended.

The **Sesiajoch**, 14,472 feet, 4411 mètres, between the Parrotspitze and Signalkuppe, was traversed by Messrs H. B. George and A. W. Moore with Christian Almer and Mathias zum Taugwald on July 11, 1862, from châlets 2½ hs. above Alagna to the Riffel, in 18 hours. This pass is seldom used. Perhaps, with the facilities afforded by the Bétemps *cabane*, it may become more fashionable. See Map of the Valley of Zermatt.

The route for the **Lysjoch**, about 14,000 feet, leading to the valley of Gressoney, between Ludwigshöhe and the Lyskamm is for the greater part of the way on the Northern side the same as for the Lyskamm or the Sesiajoch. See View from the Gornergrat at the end of the volume, and Map of the Valley of Zermatt. The *cabane* Bétemps can be used as a starting-point. "The first expeditions to the Lysjoch on record date back so long ago as 1778-80."—*A. J.*, vol. v, p. 136.

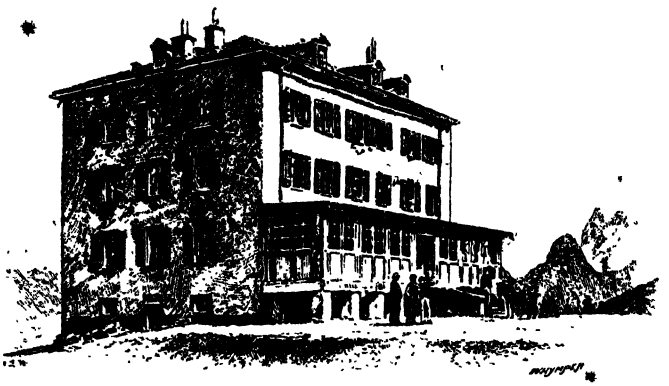
In 1894, a dramatic incident occurred on the Zermatt side of the Lysjoch, Her Majesty the Queen of Italy was crossing the pass on Aug. 25, with a caravan of 30 persons, led by Alessandro Welf of Gressoney, under the general direction of Baron Louis Peccoz. The summit was crossed, and for the first hour and a half Her Majesty and two ladies were dragged down in sledges. When this manner of progression could no longer be continued, Welf took the lead, followed by the Baron and the Queen. Presently they approached some crevasses, and the Baron called out loudly "Crevasses! Take care of the Queen!" A few seconds afterwards, Welf felt a pull on the rope, and, turning, saw the Baron falling on the snow. The others gathered around, but they could do nothing. Baron Peccoz gave one or two gasps, and expired. The spot where this occurred is marked with a cross on the View from the Gornergrat. The body was brought down to Zermatt on the evening of the 28th; the next day was conveyed by special train to Visp, and thence back to Italy over the Simplon. It is stated that physicians had recommended the Baron not to undertake long expeditions on account of his heart.

The **Felikjoch**, 13,347 feet, 4068 mètres, between the Lyskamm and Castor leads either to Fiery (Val d'Ayas) or to Gressoney (V. of Gressoney). It was first crossed on Aug. 23, 1861, by Messrs. W. Mathews and F. W. Jacomb, with Michel-Auguste Croz and J. B. Croz, who took 14 hs. 40 min. from a châlet 2½ hs. above Gressoney to the Riffel (including the ascent of Castor *en route*). They called this pass the Col des Jumeaux, but this name is now superseded. The *cabane* Bétemps can be used as a starting-point for the Felikjoch. See View from the Gornergrat, and Map of the Valley of Zermatt.

On Aug. 26, 1876, Messrs. Hayman and Johnson (English), and the guides Franz and Ignaz Sarbach (Swiss), started from the Valley of Gressoney with the intention of crossing the Felikjoch, but they *mistook the way*, and went to the east of the Col. While endeavouring to get on to the right route, they *started an avalanche*. Mr. Johnson and Franz Sarbach were buried in and smothered by the snow, and the two others were severely frost-bitten. Mr. Hayman died twelve days later.

The **Zwillingspass**, 12,668 feet, 3861 mètres, between Castor and Pollux, leads to the Val d'Ayas. Mr. Winkworth, who made the first passage on July 31, 1863, took 6¼ hs. from the Riffel to the Col, and proposed the name Col de Verra for the pass, as it led on the Italian side to the Combe di Verra. The name has not been adopted.

The **Schwarzthor**, 12,274 feet, 3741 mètres, between Pollux and the Breithorn, leading to the Val d'Ayas, was first crossed by Mr. John Ball in 1845. From the Riffelhaus to the summit reckon 6 hs. The Breithorn was ascended from the Schwarzthor on Aug. 16, 1881, by Mr. J. S. Anderson with Ulrich Almer and Aloys Pollinger, who arrived on the top at 6.45 p.m.! having taken 16¼ hs. from the Riffelhaus!



THE LAC NOIR HOTEL.

CHAPTER XI.

EXCURSIONS FROM THE LAC NOIR HOTEL.

THE LAC NOIR—THE FURGG GLACIER—THE THEODULE PASS—THE BREUILJOCH—THE FURGG GRAT—THE FURGG JOCH—ROUTES UP THE MATTERHORN—THE NORTHERN OR ZERMATT ROUTE—THE SOUTHERN OR BREUIL ROUTE—THE ZMUTT ROUTE—DEATHS OF BAUMANN, IMSENG, MUMMERY, PENHALL, PETRUS, ETC.

THE Lac Noir Hotel takes its name from a small piece of water which is drying up. The only sport to be had in it is fishing for water-beetles. The "Matterhorn Hotel" would not be an inappropriate title for this establishment, since it is to all intents and purposes *the* Hotel for the Matterhorn. It is the nearest one to the summit, and it is the natural base for supplies. Even those who make the Ascent of the Matterhorn by the southern route often start from the Lac Noir Hotel, and get to the Col du Lion by crossing the Breuiljoch.

Simultaneously with the partial drying up of the Lac Noir a new lakelet has been formed on the southern side of the Hörnli, which may, in course of time, grow to large dimensions; and it seems probable that the Lac Noir, formerly, was at least partly maintained by drainage from the Furgg Glacier, which drainage has latterly been diverted in consequence of the shrinkage of the glacier. The new lake is against the lateral moraine on the left bank of the Furgg Glacier. A short distance away to the south, the shrinkage of the glacier has caused the exposure of a cliff in the middle of the ice, which formerly was completely covered up by it. The surface of the glacier at this part was always much riven (indicating that it was passing over a rugged bed), but it is now seen that it actually passed

over a perpendicular cliff, and yet maintained its continuity. These two features,—the formation of an entirely new lake, and the demonstration that glaciers can maintain their continuity when passing over perpendicular cliffs—have particular interest for those who are concerned in the study of glaciers.

By sleeping at the Lac Noir Hotel, the time occupied on the passage of the **Theodule Pass** can be abbreviated. Gandeck (see pp. 153, 158) may be reached in 2½ hs. by crossing the lower part of the Furgg Glacier. This route meets the ordinary one from Zermatt when about half the distance to Gandeck has been accomplished, and thenceforward the two ways are identical. See Map of Matterhorn and its Glaciers. Returning from Gandeck to the Lac Noir Hotel takes 75 to 80 minutes.

Breuil can be reached from the Lac Noir Hotel more quickly by the **Breuiljoch** (about 10,900 feet) than by the Theodule. To get to the Breuiljoch, follow the regular path to the Hörnli (pp. 139, 145); go along the lateral moraine on the left bank of the Furgg Glacier so long as there is a path, and then take to the ice, and make for the left hand (or eastern) side of the first small peak on the Furgg Grat that is to the E. of the Matterhorn. This little peak has no name. It is marked 3357 mètres on the Siegfried Map. The last bit before arriving at the Col is a slope, half-rock and half-snow. On the Italian side there is first a small bank of snow to descend, followed by a little bit of glacier and a good deal of moraine. This is succeeded by ordinary grass-slopes, over which one can go anywhere. By bearing a little round to the left, the Theodule path can be struck about 35 min. above Breuil; or an independent track may be made. See Map of Matterhorn and its Glaciers.

The **Furgg Grat** is the name given to the ridge connecting the eastern base of the Matterhorn with the Theodule. A short day can be pleasantly occupied by going from the Lac Noir Hotel to the Theodule, then following the *arête* of this ridge to the Breuiljoch, and returning *viâ* the Furgg Glacier. This excursion was first brought into notice by Mr. J. C. Leman, who took between 3 and 4 hours in passing from one end of the ridge to the other. It is best to go from E. to W., thus having the Matterhorn in view during the whole time.

The **Furgg Joch** is upon the W. side of the little peak 3357, at the extreme western end of the Furgg Grat. It was first crossed on July 10, 1863, by Mr. F. Morshead with P. Perrn (Perren) and Moritz Andenmatten, from Zermatt to Breuil, and the name Matterjoch was proposed for it; but, as this was one of the names already applied to the Theodule, another title had to be found, and it was christened Furgg Joch on the Siegfried Map. The name **Breuiljoch** was also given officially. The Furgg Joch is sometimes impassable. In 1865 I wanted to cross it from S. to N., and found that it was not possible to descend the northern side. During the two years which had elapsed since the first passage, the Furgg Glacier had shrunk so much that it was completely severed from the summit of the pass.

There is at the present time a curious confusion among the guides of the Zermatt district as to these two passes (Breuiljoch and Furgg Joch). The Furgg Joch alone is on the Tarif, and guides when engaged for the Furgg Joch conduct the tourist over the Breuiljoch!

Le Grand tour du Grand Mont Cervin.—On Saturday, August 23, 1902, Mr. W. E. Davidson with the guides Joseph Pollinger and Julius Lochmatter made the circuit of the Matterhorn, from the Lac Noir Hotel and back again, *viâ* the Col Tournanche, the Tête and Col du Lion, and the Breuiljoch. The round occupied 11 hs. actual walking. On the same day, the Hon. Gerald Fitz Gerald with the two Ulrich Almers, father and son, made the same tour, *in the contrary direction*. The two parties met on the ridge between the Tête du Lion and the Col Tournanche at about 10 a.m.

These and other excursions can be made from the Lac Noir Hotel, but its great excursion is the **Ascent of the Matterhorn.** The northern or Zermatt route is the popular one, and nearly all of those who go by it either start from, or must pass, the Lac Noir Hotel. In the Fifth Edition of *Scrambles amongst the Alps* the ascents which had been made of the Matterhorn were tabulated down to the end of 1879, and it appeared that those made from Zermatt and back to Zermatt were as compared with those made from Breuil and back to Breuil about six to one. The disproportion has become, perhaps, greater.

The route now followed for the Ascent of the Matterhorn from Zermatt is the same as that which was taken upon the first ascent, with the exceptions which will be pointed out. There are now *two* paths from Zermatt to the Lac Noir Hotel. Upon the first ascent the old, or more northern, path was followed. The other path and the Hotel were not then in existence. From the Hotel to the Hörnli ridge the present way is the same as that which was taken on the first ascent, but in 1865 there was mostly a track (not a *path*) and in some places not even a track. On the Hörnli ridge there was no track in 1865, but now there is a *path*. The *cabane* on the Hörnli ridge (see p. 80) is a little short of the place where the real Matterhorn begins to rise. A large part of those who make the ascent from Zermatt use this *cabane* as a starting-point, in which they perhaps make a mistake, as the small amount that is gained in time does not compensate for the weariness of getting through a night in such a place, under the usual conditions.

In passing from the end of the Hörnli ridge on to the actual peak, the exact ledges are traversed over which I myself led on the first ascent, and the track presently passes close to the spot where my tent was placed on July 13-14, 1865. In 1874, 1876, and 1892, I visited the tent-platform which was made here. In the two former years the wall of stones which was built around it was still standing, and my initials were to be seen on the rock behind; but in 1892 I found it difficult to recognise the spot. By natural decay, the platform was nearly obliterated, and the inscribed rock had fallen down.

So long back as 1874 there was a strongly marked track up the East Face as far as the *cabane* which was first erected (see p. 79), and little piles of stones, placed in prominent situations, pointed out the way, even to the dullest person. The route taken now-a-days at this part goes rather closer to the *arête* of the North-East ridge

than we went, in 1865. We bore more away on to the East Face, *and proceeded more directly towards the 'shoulder' at the foot of* the final peak. At the top of the 'shoulder' we went to the right, on to the northern side (see pp. 59-60), to turn the nearly perpendicular cliff which rose in front. Now, the usual way is to climb directly upwards by aid of fixed ropes and chains. **The time occupied** upon ascents is very variable. Those who start from the *cabane* on the Hörnli ridge are usually able to get back to Zermatt the same evening, if they wish. Some, however, are not so fortunate. For *tarif*, see Appendix D.

Most ascents are made in the latter part of July, August and September. Signor Vittorio Sella was the first to succeed in **an Ascent in Winter.**

"Accompanied by J.-A. and Louis Carrel he left Breuil at 11 p.m. on March 16, 1882, the night being very fine. The Glacier du Lion was gained just before 3 a.m., the snow near it being in a very powdery condition, and the Col du Lion reached at 6 a.m., the party up to this point having walked by lantern-light. The rocks were then attacked, and, says Signor Sella, 'no extraordinary difficulty' was encountered, so that at 10 a.m. the party reached the Pic Tyndall and halted for breakfast. The passage of the ridge" (*i.e.* the southern shoulder) "was somewhat awkward, but the rocks of the final peak were free from snow, and the summit was gained at 2 p.m. The air was perfectly still and the view cloudless. . . After a short halt the descent of the Zermatt face was commenced, hardly any snow being found on the *arête*. This side of the mountain was already in shade, but the way was fairly easy until after the" (northern) "shoulder was passed. From that point numerous serious difficulties had to be overcome. . . The Swiss hut was reached at 7.30 p.m., and after a very uncomfortable night Zermatt gained the next day. . . Signor Sella states that he suffered scarcely at all from the cold, save near the Glacier du Lion."—*Alpine Journal*, vol. x, p. 494.

This remarkable Winter Ascent was actually effected in less time than is frequently occupied on summer ones.

The Southern or Breuil route, though it has been largely 'facilitated,' still remains a more difficult route than the Zermatt or Northern one. Up to the top of the southern 'shoulder' there is only one way that can be regarded as the established route on the southern side,[1] but there are three ways up the final 500 feet.

1. The route originally taken by Jean-Antoine Carrel upon the first ascent on the Italian side (see pp. 73-4). So far as I am aware this has only been used on three subsequent occasions. Mr. F. C. Grove went by it in 1867 (see pp. 76-7) and in 1895 Carrel's ascent was repeated by Mr. W. E. Davidson, with Christian Klucker and Daniel Maquignaz. All of the party considered the passage of the Zmutt face excessively difficult, and are of opinion that this route is beyond all comparison harder than any of the others up the mountain, with all of which (except the lower part of Penhall's route) both Mr. Davidson or his guides are personally acquainted. Capt. J. P. Farrar, in 1903, also followed Carrel's route. 2. The route which was discovered by J.-J. and J.-P. Maquignaz (see pp. 77-8). This leads very directly towards the summit, and is largely provided with rope. 3. Another way which was discovered in July, 1887, by J.-B. Maquignaz, J.-B. Perruquet, and J. Aymonod, which goes diagonally up the precipice facing Breuil, to the E. of route 2.

[1] Some variations have been made below the Col du Lion, but the regular way to the Col is up the 'little' and the 'great staircase,' and by skirting the base of the cliffs of the Tête du Lion. See pp. 23, etc.

The main peak of the Matterhorn on the Italian side is now festooned with rope from the top down to the Col du Lion, and several hundred feet are even fixed along the base of the cliffs of the Tête du Lion! Altogether there cannot I think be less than 1200 feet of fixed rope at one part or another. Notwithstanding the assistance this affords, comparatively few ascents are made on the Italian side.

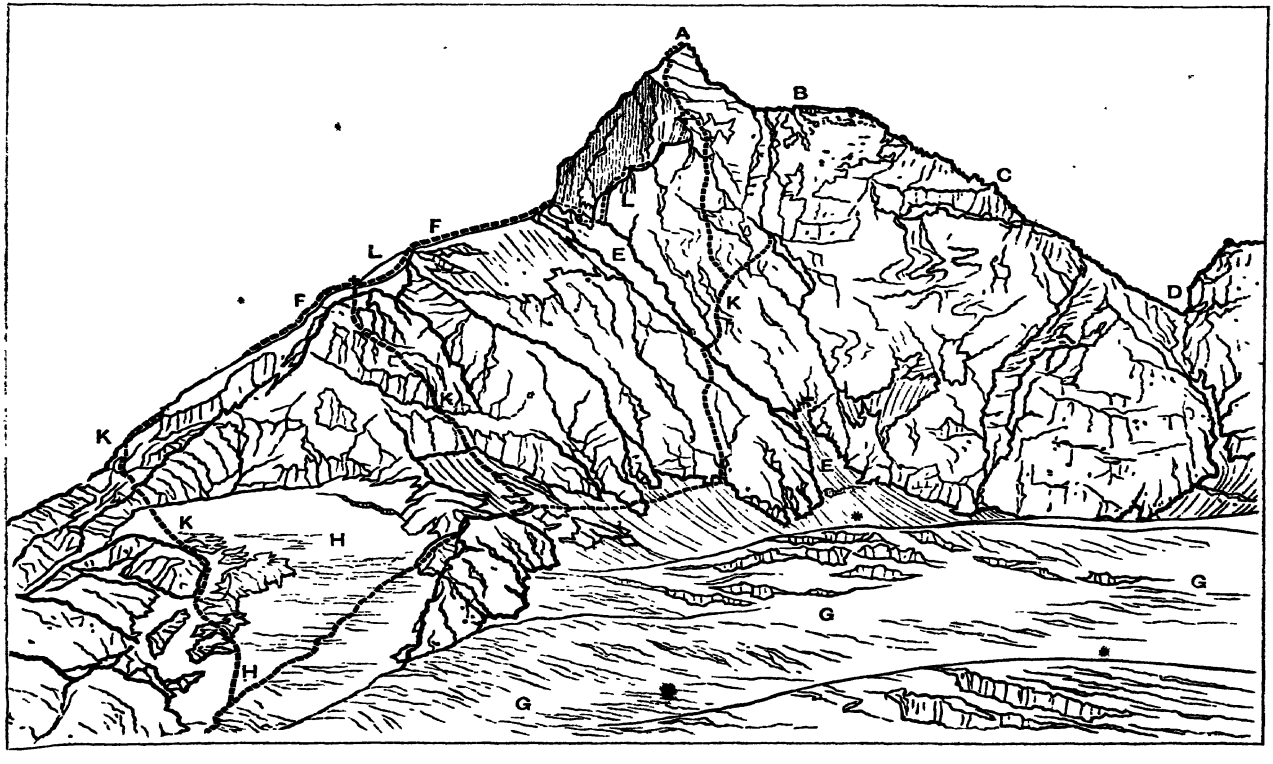
There is, besides, what is called the **Zmutt route**, that was first used by Messrs. Mummery, Penhall, and Baumann (see pp. 84, 85), leading from the upper end of the Zmutt Glacier up the long snow-slope which is a prominent feature of the north-west side of the Matterhorn. The top of this slope is shewn on the right of the diagram on p. 69, and on the left of the Illustration on p. 160. This snow-slope affords an easy way up to a very considerable elevation. The top of it is nearly on a level with the 'Great Tower' on the south-east ridge.[1] At its upper end there are some prominent pinnacles which are not easy to pass; but, after that, the ascent of the rocks above does not present unusual difficulties. The face of the Matterhorn between the Penhall couloir and the Col du Lion is almost incessantly raked by falling stones, and the couloir affords a natural path for the descent of a great many of them.[2] Though the snow-ridge is free from this objection, there are loose rocks on the arête above, which require care in handling. No ascent was made again, I believe, by this way until 1894. Since then this route has been used occasionally, but it is not likely that it will be traversed frequently, as it is circuitous, and tourists, like trade, drift into the easiest channels.[3]

Lastly, a very daring attempt to ascend **the Matterhorn by the Furgg ridge** (the rather ill-defined ridge which leads down to the Furgg Grat) was made in August 1899, by Signor Guido Rey, with the guides Antoine and Daniel Maquignaz. Signor Rey says, "I consider my *tour* as an *exploration*. I cannot call it an *ascent*." See the 4th Edition of this *Guide*, p. 207, and the *Alpine Journal*, vol. xx, pp. 17-20.

[1] See the outline upon page 183, in which A marks the Summit; B, the southern 'shoulder'; C, the 'Great Tower'; D, the Col du Lion; E, Penhall's couloir; F, F, the Zmutt snow-ridge; G, G, the Tiefenmatten Glacier; H, a feeder of the Tiefenmatten Glacier; K, K, Penhall's routes; L, L, Mummery's route.

[2] This corner was the scene of the mad prank which is mentioned in the note at the foot of p. 85.

[3] Of the three amateurs and six guides who were concerned in the first ascents of the Zmutt side of the Matterhorn six have perished. 1. Ferdinand Imseng was killed by an avalanche on Monte Rosa, Aug. 8, 1881. See p. 172. 2. Johann Petrus was killed on the Aig. Blanche de Peuteret, July, 1882. Cause of accident is unknown. See *Guide to Chamonix*, pp. 58-9. 3. Mr. W. Penhall was killed by an avalanche on Aug. 4, 1882, near Grindelwald. 4. Mr. J. Baumann disappeared in South Africa at the end of 1890 or beginning of 1891. 5. Mr. A. F. Mummery disappeared on Nanga Parbat in Aug. 1895. 6. Emile Rey slipped while descending the Aig. du Géant, on Aug. 24, 1895, and was killed on the spot. See *Guide to Chamonix*, pp. 63-4.
Three others who were concerned with the southern side of the Matterhorn have also come to premature ends, namely Dr. Tyndall and his guide Bennen, and J.-J. Maquignaz. The sad death of Dr. Tyndall will be remembered by all. Bennen was smothered by an avalanche on the Haut de Cry, Feb. 28, 1864. See *Scrambles amongst the Alps*, Appendix A; and J.-J. Maquignaz disappeared on Mont Blanc in Aug. 1890. See *Guide to Chamonix*, pp. 60-1.


A
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C
D
E
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CHAPTER XII.

ON THE VALLEY OF SAAS (SAAS THAL).

EXPLANATIONS — A YEAR OF AVALANCHES — STALDEN — EISTEN — HUTEGGEN — BALEN — SAAS (IM GRUND) — EXCURSIONS FROM SAAS — ALMAGELL — PASSES TO ANTRONA AND THE SIMPLON ROAD — MATTMARKSEE AND MATTMARK HOTEL — THE BLAUENSTEIN — MONTE MORO PASS — MACUGNAGA — THE MONDELLI PASS — SAAS-FÉE — EXCURSIONS FROM SAAS-FÉE — THE WEISSMIES HOTEL — EXCURSIONS FROM IT — HOW TO GET HOME.

FORMERLY when one spoke of **Saas** the village was meant which now is called sometimes Saas im Grund and sometimes im Grund. The hamlet of **Fée** (774 feet above Saas), which formerly was invariably called Fée, is now almost universally called Saas-Fée.[1] At present, if one asks for Saas, the natives will perhaps answer enquiringly 'im Grund?' being in doubt whether the real, original Saas or the upstart Saas-Fée is meant. Im Grund may be translated 'at the bottom,' or 'at the lowest part.' Saas-Fée means 'Fairy Saas.'

The **Saas Thal** extends from Stalden to the Monte Moro Pass. [For Stalden, see chap. vii.] The lower part of the valley, from Stalden to Saas (im Grund), is extremely picturesque, and is fairly populated;[2] but the upper portion of the valley, from Almagell to the Monte Moro, is sterile and naked, and in all probability has never had a permanent population. The few châlets which are found there are not tenanted in winter. The valley in general is rather especially liable to snow-avalanches. Ruppen says that, 'according to the chronicle writers,' 1741 was 'a year of avalanches,' and refers [p. 69] to the case of a woman who was swept away by one, and lay for 100 hours buried under the snow. *She* could hear people digging, and even listen to them speaking, but *they* could not detect her smothered cries. At last, she and her spinning-wheel were found and saved. The way up the valley is liable to be interrupted even in summer or autumn when newly-fallen snow is melting quickly. This happened on Oct. 1, 1896, when the path was cut in several places by boulders that were brought down by the rapid liquefaction

[1] De Saussure speaks [§ 2222] of the Valley of Saas. Prof. J. D. Forbes in his *Travels* [pp. 350-54] mentions Saas and Fée. Both places are referred to under these names in the 1854 ed. of Murray's *Handbook*, and in Ball's *Guide to the Western Alps*, in 1863. But in Sheet xxiii of the Carte Dufour, published in 1862, Saas is called im Grund, though Fée remains Fée; and in the Siegfried Map the nomenclature continues the same.

[2] It is stated in *Die Chronik des Thales Saas*, by Peter Joseph Ruppen, Sion, 1851, that the population of the four Communes Almagell, Balen, Fée and Grund amounted to 801 persons in 1850. At the census of 1888 it had increased to 1000. According to Ruppen, Burgener was the most common family name in the Valley.

of a heavy fall which had occurred on the previous day. The women of the Saas Thal are famed for their strength. In 1894 I saw some of them carrying full-sized doors on their backs, up the valley, for the new hotels at Saas-Fée; and I was told that the large mirrors which can be seen in those establishments had been transported from Stalden in a similar fashion.

The path from Stalden to Saas is a good mule-path all the way. Rough carts are used by the natives at some places, but the route is nowhere fit for carriages. Walking time from Stalden to Saas is about 3 hs. 15 min.; returning 2½ hs. The path was much improved in 1899.

Ascending.	min.	Descending.	min.
Stalden to Eisten . . .	65	Saas (im Grund) to Balen . .	35
Eisten to Huteggen . . .	35	Balen to Huteggen . . .	40
Huteggen to Balen (Aballa) .	60	Huteggen to Eisten . . .	25
Balen to Saas (im Grund) . .	45	Eisten to Stalden . . .	50
Total . 3 hs. 25 min.		Total . 2 hs. 30 min.	

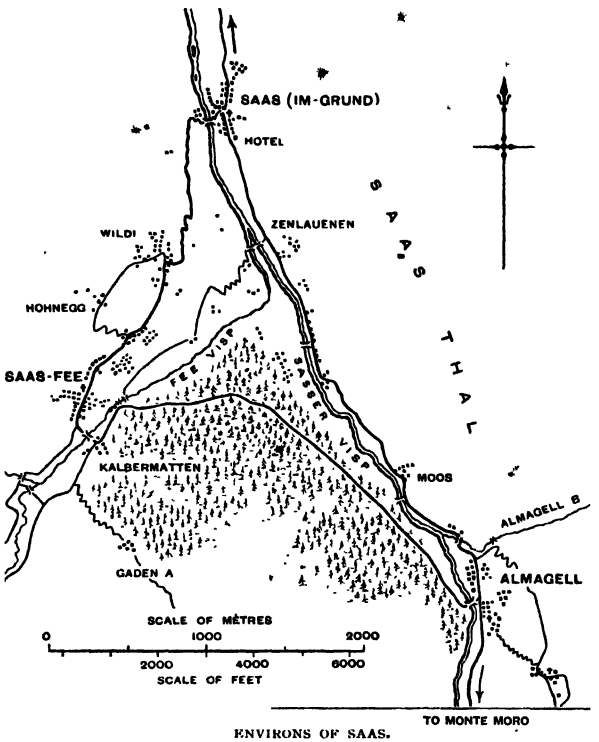
The path from Stalden to Saas crosses the Railway *at the Station;* and descends in 3 min. to a bold bridge thrown across the Mattervisp. Good views from this bridge both up and down the valley. Very shortly after passing it, the path divides. Take the one to the left, with telegraph posts. [The other path leads to the Hannig Alp. See chap. vii.] It at once commences to rise steeply, on the left bank of the valley, and soon attains a great elevation above the Saaservisp. The village seen on the other side of the valley, nearly in front, is **Staldenried**, 3468 feet, 1057 mètres; pop. 284. Look back occasionally at the mountains on the N. side of the Rhone Valley. The prominent, pyramidal peak is the **Bietschhorn**, 12,969 feet, 3953 mètres. At about 35 min. from Stalden the path is carried for a short distance along the face of a cliff, on a shelf cut in the rock; and in 30 min. more arrives at the village of

Eisten, 3557 feet, 1084 mètres; pop. 250. Post. This village was formerly united with Stalden, but it now forms a separate Commune. It is the abode of a number of Guides, who are seldom at home during the season. For their names see Appendix G. The church, which occupies a prominent position, was completed in 1897. The path up the valley still continues on the left bank, and in 35 min. reaches

Huteggen, 4088 feet, 1246 mètres, where there is a small Hotel-Restaurant by the wayside, which is the *only* inn between Stalden and Saas. A path leading across country to St. Nicholas *viâ* the Hannig Alp starts on the N. side of Huteggen; and about 200 yards south of the hamlet another one goes away through forest to the châlets of Schweiben, 5581 feet, 1701 mètres, whence one can cross the Ferrichlücke or the Gabelhorn Pass to St. Nicholas. [See chap. vii.] Six or seven min. south of Huteggen the path up the Saas Thal crosses to the right bank of the valley, by a fine, stone bridge, constructed in 1896. Notice the manner in which the rocks here have been hollowed by the torrent. The way continues on the right bank

for about 25 min., and then recrosses to the left bank. In about 20 min. more it passes the church of

Balen (Aballa), 4984 feet, 1519 mètres; pop. 172; a Commune composed of several hamlets, situated upon nearly level ground; and in 3 min. more again goes over to the right bank, and continues



ENVIRONS OF SAAS.

upon that side until Saas. Upon approaching that place, the bottom of the valley opens out, and affords the largest expanse of flat grazing-ground in the district.

Saas, or Saas im Grund, or im Grund, 5125 feet, 1562 mètres; pop. 429. Post and Telegraph. **Hotel.**—HOTEL-PENSION MONTE MORO, quite at the southern end of the village. Saas is pleasantly situated, and is increasing in public favour, though the great peaks are not visible from the village. It was formerly a starting-point for a large number of excursions, but the Weissmies Hotel has become the natural base for some of those towards the East, and Saas-Fée for most of

those on the West. Almagell also, as it now possesses an inn, is available for the Antrona and Zwischbergen passes, and for various ascents. Saas, however, remains the starting-point for the easiest way from the Saas Thal to the Simplon Road, which is by the

Simeli Pass, 9934 feet, 3028 mètres, *viâ* the Mattwald Alp, past the S.E. side of the Mattwaldhorn, 10,673 feet, 3253 mètres, into the Gamser Thal. After descending some snow-beds on the northern side of the Pass, the head of the Valley is rounded to remount to the

Sirwolten Pass, 8740 feet, 2661 mètres. The route then descends upon the Simplon Road (which is scarcely 3 kils. to the E.), a little above Refuge vii, about half-way between the summit of the Simplon and Simpeln. Time from Saas to the top of the Simeli Pass is 4¾ to 5 hs., and thence to the Simplon Hospice or Simpeln about 3½ hs. The total time occupied is about the same if the passes are crossed in the reverse direction.

From the summit of the Simeli Pass one can go down the **Gamser Thal** (also called **Nanz Thal** or **Nanzer Thal**) in 5 hs. to the village of Gamsen, 2192 feet, 668 mètres, in the Rhone Valley, 3½ kils. W. of Brieg. The path for most of the way is upon the left bank; but it crosses to the other side just north of the châlets which are marked Mittlenhaus on the Siegfried Map, and after a rather steep descent it recrosses to the left bank and ascends for more than 500 feet before the final descent of 3200 feet into the Valley of the Rhone begins. There are no permanent inhabitants in the Nanz Thal. On Oct. 13, 1897, I went over the Simeli Pass and down the valley without seeing man, woman, or child, or animal of any description, on any part of the route.

The principal of the little excursions from Saas are, (1) to the Hotel Weissmies, (2) to Saas-Fée, and (3) up the Saas Thal to the Monte Moro Pass. Guides are unnecessary in fine weather. For other excursions see pp. 190-92, and for **Tarif of Excursions from Saas** see Appendix C.

(1) There are two ways to the **Hotel Weissmies,** a small mountain inn situated to the N.E. of, and about 3000 feet above Saas, on a lower slope of the Laquinhorn. These two paths unite a little above the châlets on the Trift Alp, and by either of them the Hotel Weissmies can be gained in 3 hours.

(2) There are two paths from Saas (im Grund) to **Saas-Fée,** one commencing nearly opposite to the Hotel Monte Moro, and the other about half a mile to its south, at Zenlauenen (see Plan of Environs of Saas). By either route it takes 40 to 45 min. to get to Saas-Fée. The great attraction of this spot is the magnificent *cirque* of the Mischabel, which is one of the finest things of its kind in the Zermatt district. For Hotels at and Excursions from Saas-Fée, see later.

(3) To **Mattmark See** and the **Monte Moro Pass.** We will take this first.

The path up the bottom of the valley continues on the right bank, and leads in about 35 min. to the village

Almagell, Almagel or Almengell, 5509 feet, 1679 mètres; pop. 190. Post. A small inn called RESTAURANT PENSION PORTIENGRAT, 12 beds, was opened here in 1896. Fine waterfall. See Appendix G for names of Guides. Almagell is near the entrance to the Furggthal, at the head of which is the Antrona Pass.[1]

[1] This pass has been known for a very long time. Dr. Schiner says in his *Descrip. de Dép. du Simplon*, p. 166, "on passait autrefois fréquemment par Antrona . . . avec les chevaux et autres bétails. On appelait ces passages déjà en 1440 *fort vieux passages.*"

The **Antrona Pass** affords the easiest and quickest way of getting from the Saas Thal to the Italian Lakes. Almagell to the summit (9331 feet, 2844 mètres) takes about 4 hours. Nowhere steep. Mules were formerly taken over this pass (see note, p. 187), but at the present time they cannot cross it, although they can go within an hour of the top. The summit lies between the Latelhorn (10,561 feet, 3219 mètres, easily ascended from this direction) and the Jazzihorn, and on it there is an old, roofless cabane which was formerly used as a stable. The path on the Italian side at first descends steeply, and in about 45 min. passes near the southern side of the little Lago di Cingino, 7191 feet, 2192 mètres, and presently arrives at the first châlets (Alpe Cingino), 6663 feet, 2031 mètres, in the Val Antrona. The path thence to the village of Antronapiana, 2959 feet, 902 mètres, small hotel, is good. Time from summit about 4 hs. A carriage-road leads from Antronapiana to Villa d'Ossola Railway Stn., whence one goes (southwards) to the Lake of Orta.

Antronapiana can also be reached from the Saas Thal by the **Ofenthal-pass**, 9311 feet, 2838 mètres, which leads through the Ofenthal (see p. 189), and crosses the chain S. of the Jazzihorn, joining the route of the Antrona Pass a little below the Alpe Cingino. Time Almagell to Antronapiana about 9 hours.

The **Zwischbergen Pass**, 10,656 feet, 3248 mètres, at the head of a small valley running towards the E. from Almagell, goes between the Weissmies and the Portjengrat, and leads by a rather roundabout way to the Simplon Road. Not often used. Almagell to summit 3¾ to 4 hs. Sometimes upon this side of the pass there is little or no snow. On the eastern side, the route leads at first over snow, and then across the small Gemein Alp Glacier to the Val Varia. There are tracks on each side of the stream at the head of this valley, but lower down it there is a path on the left bank *only*. From the summit to Gondo on the Simplon Road, 6 hours.

The path up the valley for the Monte Moro Pass continues on the right bank, and in 5½ kils. from Almagell passes the end of the **Allalin Glacier**, and arrives at the **Mattmarksee**. Notice the two great, lateral moraines. "The moraine supplies," says J. D. Forbes (*Travels*, p. 352), "the well-known blocks of gabbro, containing Smaragdite, which are recognised so extensively over the plains of Switzerland, and which have no native locality in the Alps but here. They are brought down by the glacier from the inaccessible heights of the Saasgrat, . . so that the rock may probably never be found *in situ*." This glacier extends to the bottom of and almost across the valley, leaving only just room for the stream flowing out of the lake. This was reputed to be deep. It is evidently shallow, and is now almost annihilated. The **Mattmark Hotel** (This is the *only* inn between Amagell—Macugnaga. *Persons crossing the Monte Moro Pass, in either direction, do well to bring food along with them*), 6965 feet, 2123 mètres, is 1·kil. south of the southern end of the lake, or about 7½ kils. from Almagell and in time about 1 h. 45 min. A few hundred yards south of the hotel, and against the path, there is the great erratic block called the **Blauenstein**, which is one of the largest boulders in the Alps.

According to Charpentier (*Essai sur les Glaciers*), who quotes Venetz and does not seem to have seen the boulder himself, it measures 68 feet (French?) long, 57 broad, and 63 high, and contains 244,000 cubic feet. I think these dimensions are in excess of the truth. The calculation of its volume is erroneous, as allowance is not made for the rounding of the angles. Charpentier says that it was deposited at this place by the Schwarzenbergg Glacier

in 1818, and that in 1821 there were old men living at Saas who had heard their fathers say that they had seen it upon the back of the glacier.

The end of the Schwarzenbergg Glacier is now a kilomètre from the boulder, and is the next object of interest on the way. A mile south of the Mattmark Hotel, one passes some châlets at the **Distel Alp,** 7120 feet, 2170 mètres, which are the last on this side of the pass [The Ofenthal, at the head of which is the Ofenthalpass to Antronapiana, leads away hence to the E.]. The path now steepens, and in 2 kils. arrives at **Thälliboden,** 8189 feet, 2496 mètres, at the



THE BLAUENSTEIN, VALLEY OF SAAS, AND MATTMARK HOTEL.

end of the glacier of that name. Mules stop here, and the rest of the way to the summit of the pass (which as the crow flies is distant 1⅓ kil.) is generally over snow lying between the Thälliboden Glac. on the E., and the Seewineng Glac. on the W. The scenery here is desolate, but on arriving at **the Col (Monte Moro, or Passo del Moro),** 9390 feet, 2862 mètres, one is rewarded with a superb view of the Italian side of Monte Rosa. The immediate summit of the pass is shelterless. Protection can be obtained during bad weather by descending a short distance on the southern side. From Mattmark Hotel to the summit reckon 2¾ to 3 hs. From the summit to Mattmark can be accomplished in 1 h. 30 min.

Upon commencing the descent into Italy, the route leads at first over snow-beds and then by rocky ground, towards the S.S.W., as far as the châlets of Galkerne, 6894 feet, 2101 mètres. It then goes S.S.E., and descends rather more rapidly (principally through forest) into the Val Anzasca, which it joins at Pratti, one of the hamlets of **Macugnaga**, 3937 feet, 1200 mètres. **Hotels.**—HOTEL MONTE MORO (moderate prices), HOTEL MONTE ROSA. The descent from the summit to Macugnaga occupies about 2¾ hs.; from Macugnaga to summit is a little less than 4 hs. For the head of the Val Anzasca, and route from Zermatt by the New Weissthor, see chap. x.

[There is another way from the Saas Thal to the Val Anzasca by the **Mondelli Pass**, 9321 feet, 2841 mètres. This diverges from the Monte Moro route at Thälliboden, crosses the chain about mid-way between the Jodorhorn and Pizo d'Antigine, and descends S.E. to Mondelli and a little farther on to Prequartera, in the Val Anzasca, about 7 kils. below Macugnaga.][1]

I return now across the Monte Moro Pass to speak of the excursions from Saas-Fée and the Weissmies Hotel. **Saas-Fée**, 5899 feet, 1798 mètres; pop. 280. **Hotels.**—GRAND HOTEL SAAS-FÉE; GRAND HOTEL BELLEVUE; GRAND HOTEL DU DOM; HOTEL-PENSION SAAS-FÉE. Tailor, Shoemaker, Restaurant, and Bazar Supersaxo (photographs, books, ice-axes, etc.). The large church was completed in 1896.

Saas-Fée cannot be seen from im Grund or from the bottom of the Saas Thal. It is situated in a lateral valley (at some height above the main one), which leads towards the West to the foot of the Mischabelhörner. The Fée basin is surrounded by the Allalinhorn, Alphubel, Täschhorn, and Dom, and these great mountains form a sort of *cirque*, at the end of the valley. The distance of the village from the summit of the Dom is about 4½ miles, and the difference of level is about 9000 feet. Precipitous cliffs and fine glaciers bound the head of the basin, while down below, "embosomed in this imposing scene of desolation and solitude is the sweetest pastoral valley that ever God created or man enjoyed. The pasture grounds are rich and well-watered, the grass is of the freshest green."—*Mr. Justice Wills.*

This (the eastern) side of the Mischabelhörner is much more striking than the western one, facing the Nicolai Thal, and is better seen; but to thoroughly appreciate the proportions of these noble mountains one must get higher than the bottom of the valley of Saas-Fée. In the immediate neighbourhood, the **Egginerhorn**, 11,080 feet, 3377 mètres (about 4¾ hs. ascending, 2¾ descending), and the **Mittaghorn**, 10,328 feet, 3148 mètres (about 3½ hs. ascending), are favourite points of view. The **Egginergrat** from the Mittaghorn to the Egginerhorn, keeping on the crest of the ridge the whole way, is a good climb. On the opposite side of the Saas Thal (to the E., N.E., and S.E. of im Grund) the positions are even better, and are numerous.

[1] De Saussure refers (vol. iv, p. 387) to the strength of the women in the valleys around Monte Rosa. "I will give a notion of their strength," he says. "I had made up at Macugnaga an extremely heavy box of minerals, and asked my host if he could find a man who would carry it to Vanzon" [Vanzone], "whence it might be sent to Geneva. He answered quite seriously that there wasn't a man in the district who could carry such a burden such a distance; but that if it was all the same to me to have a woman, he could easily find one who would carry it willingly, and it is the fact that two were sufficient to carry a mule-load."

The principal **ascents made from Saas-Fée** are those of the Balfrinhorn, Ulrichshorn, Nadelhorn, Süd-Lenzspitze, Dom, Täschhorn, Alphubel and Allalinhorn. Those of the Dom and Täschhorn are effected more easily from other directions, and this side of those peaks has been condemned, from the frequency of falling stones. See p. 120. The principal **passes from Saas-Fée** are the Ried Pass (to St. Nicholas), the Nadeljoch and Domjoch (to Randa), and the Mischabeljoch, Alphubeljoch and the Fêejoch (to the Täsch valley and Zermatt). It is better to take the three latter in the reverse direction. One of the nicest **little walks** from Saas-Fée is through forest to Almagell, by the track marked on the Plan on page 186. In shade the whole way; fine examples of *roches moutonnées* near Saas-Fée. On arriving opposite to Almagell, cross the bridge, and return down the right bank of the Saas Thal to Zenlauenen or im Grund, and back home by one of the usual paths. The same walk may be extended to Mattmark and the Blauenstein (which will take, going, about 2 hs. 20 min.); or it may be continued to the top of the Monte Moro Pass, without undue fatigue.

The **Tarif** of excursions from Saas embraces some which are made from Saas and others which belong properly to Saas-Fée. No distinction is made. See Appendix C. For **Guides** see Appendix G. The **Season** at Saas-Fée closes earlier than at Zermatt. By the end of September the place, sometimes, is almost or quite deserted.

The **Weissmies Hotel** (about 8125 feet) is a little inn (opened in 1894 by the proprietor of the Hotel Monte Moro at Saas) placed in an excellent position as a point of view, intended to facilitate the ascents of the Fletschhorn, Laquinhorn and Weissmies, and the passage of the Rossboden Pass, Fletschjoch and Laquinjoch. The view from it is very extensive, and embraces the whole of the Italian side of Monte Rosa as far as the Col de la Loccie, the whole of the range of the Mischabel, and (near at hand) the Fletschhorn, Laquinhorn and Weissmies. The very highest point of the Fletschhorn is not visible, and not much of the Oberland can be seen.

The **Fletschhorn**, 13,127 feet, 4001 mètres, is the most northern of three considerable peaks on the eastern side of the Valley of Saas. They are all comparatively easy of access, and all have been ascended from several directions. Whether the Fletschhorn is mounted from the W. or S. the time occupied will be nearly the same. Ascending, about 5 hs.; descending, 3 hs. The **Laquinhorn**, 13,140 feet, 4005 mètres, is only 1¼ kil. S. of the Fletschhorn. Ascending, 4½ to 5 hs. I am informed that a descent has been effected from the summit to Saas in 3 hs. The **Weissmies**, 13,225 feet, 4031 mètres, is 3½ kils. S. of the Laquinhorn. From the Hotel to the top occupies about 5 hs. The descent may be made in 2½ to 3 hours.

The **Rossboden Pass**, about 10,800 feet, is the easiest of the three ways of getting from the Weissmies Hotel to the Simplon Road. From the Hotel to the top takes 4 hs. and from the top to Eggen (2 kils. above Simpeln) about 3½ hs. This pass appears to have been known for a long time. In 1833, a description of a passage of it was published at Geneva, entitled *Passage du Roth-horn*, par Marc Viridet. The author set out from Saas at 6 a.m., on Aug. 1, 1833, with a couple of young friends and the Innkeeper, Moritz Zurbrucken. Two of the party had bâtons, M. Viridet carried an umbrella, and the fourth had no support. They were without rope or ice-axe, and experienced some of the vicissitudes which are usual, when traversing glaciers, under such circumstances. M. Viridet advises his readers not to cross the Roth-horn (Rossboden Pass), and concludes by saying, "but if you *will* try this journey, *munis-toi de guides, de cordes, et de bâtons ferrés.*" Good advice.

The **Fletschjoch**, (the next pass in order, proceeding from N. to S.), 12,051 feet, 3673 mètres, leads between the Fletschhorn and Laquinhorn to the Simplon Road. Its passage seems to have been first effected by Messrs Jacomb and Chater with Christian Michel and Peter Baumann in 1863. Not recommended. The **Laquinjoch**, 11,473 feet, 3497 mètres, between the Laquinhorn and Weissmies (also leading to the Simplon Road) is more practical. It takes about 2¼ hs. from the Hotel to the top of the pass, and 4 to 5 hs. from the top to Simpeln.

And now, How are you going to get back? Perhaps time is up or money running short? Then return the way you came, for it is the quickest and cheapest route. But if anything is left return by Bern,[1]—saunter on the Cathedral Platform, and then feed the Bears. Dine leisurely at the Buffet in the Station (reasonable prices); take your seat *in good time* in a through carriage to Calais (by the Delle route),[2] and go to sleep,—knowing that the Douaniers at Belfort will be sure to wake you up about midnight. After that, you can go to sleep again, and dream of Home, sweet Home!

[1] Bern can be reached most *quickly* from Zermatt by taking train to Visp, thence travelling *viâ* Lausanne and Fribourg; but a person who is so happy as to be free from baggage can get to Bern from Zermatt more *economically* by walking from Louèche (Suste or Souste) to Leukerbad, and over the Gemmi Pass. See p. 99, and Plan on p. 97.

[2] One of the advantages of this route is that luggage registered to London is not examined *in France*, or until it arrives at the Station to which it was registered from Bern.

APPENDIX.

A.—'TARIF' OF EXCURSIONS FROM ST. NICHOLAS.

	Guides. Francs.	Porters. Francs.
Ascent of the **Balfrinhorn**	25	20
do. **Brunnegghorn**	40	25
do. **Grabenhorn**	25	15
do. **Nadelhorn**	35	20
do. do. descending to **Saas**	45	25
do. do. descending to **Randa**	40	20
do. **Rothhorn (Jungthal)**	15	10
do. **Schwarzhorn**	15	10
do. **Sparrenhorn**	15	10
do. **Ulrichshorn**	30	20
Over the **Balfrin Glacier** to **Saas**	20	15
By the **Hannig Pass** to **Saas-Fée**	15	10
do. **Jung Pass** to **Gruben**	15	10
do. **Ried Pass** to **Saas-Fée**	30	20

B.—'TARIF' OF EXCURSIONS FROM RANDA.

Ascent of the **Bieshorn**	50	30
do. **Brunnegghorn**	45	30
do. **Dom**	60	40
do. do. by the **Domjoch**	80	50
do. **Durrenhorn**	30	20
do. **Grosse Kastel**	20	15
do. **Hohberghorn**	30	20
do. **Südlenspitz**	80	40
do. **Täschhorn**	60	40
do. **Weisshorn**	80	45
To the **Dom Cabane**	20	15
do. **Weisshorn Cabane**	20	15
By the **Biesjoch** to **Gruben**	40	25
do. do. **Zinal**	45	25
do. **Nadeljoch** to **Saas-Fée**	45	30
do. **Schallijoch (Schallenjoch)** to **Zinal**	50	30

C.—'TARIF' OF EXCURSIONS FROM SAAS.

Over the **Dom** to **Randa**	100	70
Ascent of the **Allalinhorn**	25	15

N.B.—This tarif should be posted in all mountain hotels in the Canton Valais, and in the Cabanes.

Before engaging Guides or Porters, it is desirable to have a clear understanding whether the agreed price includes return. If a night is passed in a *cabane* the prices quoted in the *Tarif* do not apply.

	Guides. Francs.	Porters. Francs.
Ascent of the **Almagellhorn**	20	10
do. **Alphubel**, by the **Alphubeljoch**	35	25
do. do. do. **Mischabeljoch**	40	30
do. **Balfrinhorn**	30	20
do. **Egginerhorn**	20	10
do. **Fletschhorn**	40	30
do. **Joderhorn**	12	10
do. **Latelhorn**	10	8
do. **Laquinhorn**	40	30
do. **Mittaghorn**	10	8
do. do. to **Egginerhorn**	40	30
do. **Nadelhorn**	40	30
do. **Portjengrat**	40	30
do. **Rimpfischhorn**	40	30
do. **Sewinenhorn**	10	8
do. **Simelihorn**	12	10
do. **Sonnighorn**	25	15
do. **Stellihorn**	20	10
do. **Strahlhorn**	30	20
do. **Südlenspitze** by **East arête**	100	70
do. do. *viâ* the **Nadelhorn**	90	70
do. **Täschhorn**	80	50
do. **Ulrichshorn**	30	20
do. **Weissmies**	40	25
By the **Adler Pass** to **Zermatt**	30	20
do. **Allalin Pass** to **Zermatt**	30	20
do. **Alphubeljoch** to **Zermatt**	30	20
do. **Antrona Pass** to **Antrona**	20	15
do. **Domjoch** to **Randa**	matter for arrangement.	
do. **Feejoch** to **Zermatt**	30	20
do. **Fletschhorn Pass** to **Simpeln**	30	20
do. **Furggen Pass** to **Antrona**	20	15
do. **Laquinjoch** to **Simpeln**	20	15
do. **Mischabeljoch** to **Zermatt**	40	30
do. **Mondelli Pass** to **Anzasca**	15	10
do. **Monte Moro Pass** to **Macugnaga**	20	15
do. **Nadeljoch** to **Randa**	45	30
do. **Ofenthal Pass** to **Antrona**	15	10
do. **Portjen Pass** to **Antrona**	20	15
do. **Rossboden Pass** to **Simpeln**	20	15
do. **Sewinen Pass** to **Macugnaga**	30	20
do. **Sirwolten Pass** to **Simpeln**	20	15
do. **Sonnighorn Pass** to **Antrona**	20	15
do. **Zwischbergen Pass** to **Gondo**	20	15
To the **Aleusser Thurm**	10	8

	Guides. Francs.	Porters. Francs.
To the **Almagell Alp**	6	4
do. **Furgg Alp**	6	4
do. **Innerer Thurm**	12	10
do. **Mattmark Hotel**	6	6
do. **Wiessmies Hotel**, returning same day	9	6
do. **Ofenthal**	8	6
do. **Thälliboden**	8	6
do. **Trift Alp**	6	6
do. **Triftgrat**	10	8

D.—TARIF' OF EXCURSIONS FROM ZERMATT.

Ascent of the **Allalinhorn**	35	20
do. do. descending to **Saas**	40	25
do. **Alphubel** by the **Alphubeljoch**	35	20
do. do. descending to **Saas**	50	30
do. do. by the **Mischabeljoch**	40	25
do. **Breithorn** from the **North**	50	30
do. do. from the **South**, in one day	25	15
do. do. from the **South**, sleeping on the **Theodulpass**	30	20
Ascent of the **Breithorn** from the **South**, sleeping on the **Theodulpass**, descending to **Breuil**	40	25
Ascent of **Castor**, and back to the **Riffel**	35	20
do. **Castor and Pollux**, in one day	55	30
do. do. descending to **Gressoney**	50	35
do. the **Cima di Jazzi** from the **Riffel**	15	10
do. do. *viâ* the **Findelen Glacier**	20	15
do. **Dent Blanche**	80	45
do. do. descending to **Ferpècle**	90	50
do. **Dent d'Hérens**	80	60
do. do. descending to **Prerayen**	90	70
do. **Ebihorn**	30	20
do. **Gabelhorn, Ober**	70	40
do. **Gabelhorn, Unter**	20	15
do. **Gornergrat**	8	8
do. **Hohthäligrat**	10	10
do. **Hörnli**	8	...
do. **Jägerhorn**, from the **Riffel**	30	20
Ascent of **Klein Matterhorn** (**Petit Mont Cervin**)	15	10
do. do. sleeping on the **Theodulpass**	25	15
do. **Lyskamm**	100	60
do. **Mominghorn**	40	25
do. **Matterhorn**	100	70

		Guides. Francs.	Porters. Francs.
Ascent of	**Matterhorn** as far as the northern shoulder	60	40
do.	do. descending to **Breuil**	150	100
do.	do. by the **Zmutt Glacier**	150	...
do.	**Mettelhorn**	10	8
do.	do. as far as the saddle	8	6
do.	**Mont Durand (Arbenhorn)**	30	20
do.	do. descending to **Zinal**	40	30
do.	**Monte Rosa, highest point**	50	35
do.	do. **Ludwigshöhe**	40	25
do.	do. **Nordend**	50	35
do.	do. **Parrotspitze**	50	35
do.	do. **Signalkuppe**	50	35
do.	do. **Vincent Pyramide**	40	25
do.	do. do. descending to **Alagna**	60	40
do.	do. **Zumsteinspitze**	50	35
do.	**Plattenhörner (Blattenhörner)**	10	8
do.	**Pointe de Zinal**	30	20
do.	**Pollux**, and back to the **Riffel**	30	20
do.	**Rimpfischhorn**, from the **Allalin Pass**	50	35
do.	do. from the **Adler Pass**	40	20
do.	do. from the **Fluh Alp**	35	20
do.	**Rothhorn, Ober**	10	10
do.	**Rothhorn, Unter**	8	8
do.	**Rothhorn, Zinal**	80	15
do.	do. descending to **Zinal**	100	60
do.	**Schallhorn**	40	25
do.	**Stockhorn**	15	12
do.	**Strahlhorn**	30	20
do.	do. descending to **Saas**	40	25
do.	**Täschhorn**, from the **Täsch Alp**	80	50
do.	**Tête Blanche**	25	15
do.	do. descending to **Prerayen**	30	25
do.	do. do. **Arolla** or **Ferpècle**	35	30
do.	**Tête du Lion**	60	50
do.	**Theodulhorn**	15	10
do.	**Trifthorn**	30	15
do.	**Wellenkuppe**	40	20
To the	**Bétemps Cabane** from the **Riffelberg (Riffelhaus)**	8	6
do.	do. from **Zermatt**	15	10
do.	**Findelen Glacier**	6	6
do.	**Gorner Glacier**	3	...
do.	**Gorner Glacier**, and through the *séracs* to the **Riffel** or **Riffel Alp**	12	...
	Höhbalm	5	...
	Matterhorn Cabane (Hörnli ridge)	15	10

		Guides. Francs.	Porters. Francs.
To the	**Riffel Alp Hotel**	4	4
do.	**Riffelberg (Riffelhaus)**	5	5
do.	**Riffelhorn,** from the **Riffel Alp**	8	...
do.	do. from the **Riffelhaus**	6	..
do.	do. by the *séracs* of the **Gorner Glacier**	20	..
do.	do. from **Zermatt**	10	..
do.	**Schwarzsee (Lac Noir)**	6	6
do.	**Stockje** (ruins of Cabane)	15	10
do.	**Théodule,** hut on **top of Pass**	10	...
do.	do. lower hotel (**Gandegg**)	8	...
do.	**Trift Hotel**	8	..
do.	**Zmutt Glacier**	5	...
By the	**Allalin Pass** to **Saas**	30	20
do.	**Alphubeljoch** to **Saas**	30	20
do.	**Arbenjoch** to **Zinal**	40	30
do.	**Bertol, Col de,** to **Arolla**	30	25
do.	**Bouquetins, Col de,** to **Arolla**	30	25
do.	**Cimes Blanches** to **Fiery**	25	15
do.	**Durand, Col,** to **Zinal**	35	25
do.	**Feejoch** to **Saas**	30	20
do.	**Felikjoch** to **Gressoney**	40	25
do.	**Furggjoch** to **Breuil**	25	15
do.	**Hérens Col d',** to **Ferpècle**	30	25
do.	**Jägerjoch** to **Macugnaga**	40	30
do.	**Lysjoch** to **Alagna**	50	40
do.	do. to **Gressoney**	45	30
do.	**Mischabeljoch** to **Saas-Grund**	35	25
do.	**Moming, Col de,** to **Zinal**	50	35
do.	**Rothhornjoch** to **Zinal**	40	30
do.	**Schwarzthor** to **Fiery**	40	25
do.	**Sesiajoch** to **Alagna**	60	45
do.	**Theodul Pass (Matterjoch)** to **Breuil**	20	15
do.	**Tiefenmattenjoch** to **Prerayen**	40	25
do.	**Tournanche, Col de,** to **Breuil**	40	25
do.	**Trift Pass (Triftjoch)** to **Zinal**	35	25
do.	**Valpelline, Col de,** to **Prerayen**	35	20
do.	do. the **Col du Mont Brulé,** and the **Col de l'Evêque** to **Mauvoisin**	60	40
do.	**Valpelline, Col de,** and the **Col du Mont Brulé** to **Arolla**	30	25
do.	**Weissthor, New,** to **Macugnaga**	35	25
do.	do. **Old,** to **Macugnaga**	40	30
do.	do. **Schwarzberg,** to **Mattmark**	30	20
do.	**Zinal, Col de (Zinaljoch, Col de la Dent Blanche),** to **Zinal**	35	25
do.	**Zwillings Pass** to **Fiery**	40	25

TARIF' FOR HORSES AND MULES AT ZERMATT.

		Francs.
To the	**Village of Findelen**	8
do.	**Glacier of Findelen**	10
do.	**Gorges of the Gorner**	5
do.	**Gorner Glacier**	8
do.	**Gornergrat**	15
do.	do. returning by the **Findelen Valley**, or *vice-versa*	18
do.	**Mettelhorn**[1]	18
do.	**Lac Noir (Schwarzsee)**	10
do.	do. returning by the **Staffelalp**, or *vice-versa*	15
do.	**Plattje Cabane**	20
do.	**Riffelalp**	8
do.	do. returning by the **Findelen Valley**, or *vice-versa*	10
do.	**Riffelberg**	10
do.	do. returning by the **Findelen Valley**, or *vice-versa*	12
do.	**Täschalp**	15
do.	**Col Theodule**, as far as the moraine	15
do.	do. as far as **Hotel Gandegg**	17
do.	**Trift Hotel**	15
do.	**Village of Zmutt**	8
do.	**Zmutt Glacier**	10

'TARIF' AT ZERMATT FOR 'PORTEURS À CHAISE' (PER MAN).

To the	**Village of Findelen**	4
do.	**Glacier of Findelen**	6
do.	**Gorges of the Gorner**	3
do.	**Gorner Glacier**	4
do.	**Gornergrat**	8
do.	do. returning by the **Findelen Valley**	10
do.	**Mettelhorn**[1]	10
do.	**Lac Noir (Schwarzsee)**	6
do.	do. returning by **Staffelalp**	8
do.	**Plattje Cabane**	12
do.	**Riffelalp**	4
do.	do. returning by the **Findelen Valley**	6
do.	**Riffelberg**	6
do.	do. returning by the **Findelen Valley**	8
do.	**Col Theodule**, as far as the **Hotel Gandegg**	10
do.	do. to the **summit of the Pass**	12
do.	do. and across to **Breuil**	15

[1] Enquiry should be made whether horses or *chaises à porteur* can go to the top.

E.—Mountains in and around the Basin of the Valley of Zermatt.

Name of Peak.	Height in Mètres.	Height in Feet.	Situation.
Allalinhorn . . .	4034	13,235	E.S.E. ½ E. of Täsch; E.N.E. of Zermatt; N.E. of Allalinpass.
Alphubel . . .	4207	13,803	E. ½ S. of Täsch; S. of Mischabeljoch; N.W. of Alphubeljoch.
Arbenhorn (Mt. Durand)	3744	12,284	W. by N. of Zermatt; E. of Col Durand; W. of Arbenjoch.
Augstbordhorn . .	2974	9757	West of Stalden.
Balfrin (Balenfirn) .	3802	12,473	S. of Stalden; E. of Herbrigen.
Balmenhorn (Monte Rosa)	4324	14,187	E. by S. of Lysjoch.
Barrhorn . . .	3621	11,880	W.S.W. of St. Niklaus.
Bieshorn . . .	4161	13,652	W.N.W. of Randa; W. of Biesjoch.
Bigerhorn . . .	3180	10,433	S.E. of St. Niklaus.
Breithorn . . .	4171	13,685	South of Zermatt.
Brunneggh orn . .	3846	12,619	N.W. of Randa; S.E. of Brunneggjoch.
Castor	4230	13,878	S.S.E. of Zermatt; S.E. of Zwillingspass.
Cima di Jazzi . .	3818	12,526	E.S.E. of Zermatt; S. of the New Weisshor.
Cima di Roffel . .	3645	11,959	N.E. of Cima di Jazzi.
Dent Blanche . .	4364	14,318	W. by N. of Zermatt.
Dent d'Hérens (d'Erin)	4180	13,714	W.S.W. of Zermatt; E. of Tiefenmattenjoch.
Dom	4554	14,941	E. by S. of Randa; N.E. of Zermatt; S. of Nadeljoch.
Dreizehnenhorn . .	3056	10,026	W. by S. of Stalden.
Durchlochhorn . .	2704	8872	East of St. Niklaus.
Dürrenhorn . . .	4035	13,238	N.E. by E. ½ E. of Randa; N. of Hohberg Pass.
Ebihorn . . .	3343	10,968	W. of Zermatt.
Egginerhorn . .	3377	11,080	Between the Feegletscher and the Saas Thal.
Ferrichhorn . . .	3292	10,801	S.E. by E. of St. Niklaus; S. of Ferrichlücke.
Festihorn . . .	3249	10,660	W. of St. Niklaus.
Fillarhorn . . .	3679	12,070	S.E. by E. of Zermatt; S. of the Old Weisshor.
Fluchthorn . . .	3802	12,473	N.E. of the Strahlhorn.
Fluhhorn . . .	3318	10,886	E. of Zermatt; W. of Langenfluhpass.
Furggen, Gr. . .	2820	9252	E.S.E. of Grächen.

Name of Peak.	Height in Mètres.	Height in Feet.	Situation.
Furggen, Kl.	2650	8694	E. ½ S. of Grächen.
Furgg-grat	3498	11,477	Between the summit of the Theodul-pass and the Matterhorn.
Furggwanghorn	3163	10,377	W.N.W. of St. Niklaus; N. of Jungpass.
Getschunghorn	2860	9383	W. of Täsch.
Gabelhorn	3135	10,276	E. ½ S. of St. Niklaus.
Gabelhorn, Ober	4073	13,363	W.N.W. of Zermatt.
Gabelhorn, Unter	3398	11,149	W. by N. of Zermatt.
Galenhorn	3360	11,024	E. of Herbrigen; N. of Galenpass.
Gemshorn	?	?	N.W. of Saas-Fée; E.N.E. of the Ulrichshorn.
Gornergrat	3136	10,289	North side of the Gorner Glacier.
Grabenhorn	3375	11,072	E.S.E. of Randa.
Gugel	2707	8882	E.N.E. of the Riffelhaus.
Hohberghorn	4226	13,865	E.N.E. of Randa; S. of Hohberg-pass.
Hohthäligrat	3289	10,791	S.E. by E. of Zermatt.
Hohwänghorn	3182	11,424	W. of Zermatt; N. side of Zmutt Glacier.
Hörnli	2893	9492	S.W. ½ W. of Zermatt.
Jägerhorn	3975	13,012	S.E. by E. of Zermatt; N. of Jäger-joch.
Leiterspitz	3218	10,558	E. by N. of Täsch.
Ludwigshöhe	4344	14,252	Head of the Grenz Glacier.
Lyskamm	4538	14,889	S.E. by S. of Zermatt; E. of Felik-joch; W. of Lysjoch.
Matterhorn or **Mont Cervin**	4482	14,705	S.W. by W. of Zermatt.
Mettelhorn	3410	11,188	S.W. by W. of Täsch; N. of Zermatt.
Mittaghorn	3148	10,328	Between the Feegletscher and the Saas Thal.
Monte Rosa	4638	15,217	S.E. of Zermatt.
Nadelhorn	4334	14,218	E. by N. of Randa.
Nordend (Monte Rosa)	4612	15,132	N.N.E. of the Höchste Spitze.
Petit Mont Cervin	3886	12,750	S. by W. of Zermatt; E. of Theodul-pass.
Parrotspitze (Mte. Rosa)	4463	14,643	Head of the Grenz Glacier.
Plattenhörner	3136	10,261	N. of Zermatt.
Platthorn	3249	10 660	E. by S. of St. Niklaus; N. of Ferrichlücke.
Pollux	4094	13,432	S.S.E. of Zermatt; N.W. of Zwillingspass.
Riffelhorn	2931	9616	S. by E. of Zermatt.

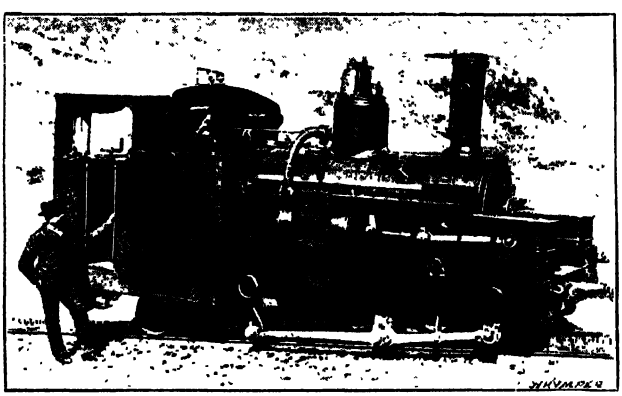
Name of Peak.	Height in Mètres.	Height in Feet.	Situation.
Rimpfischhorn . .	4203	13,790	E. of Zermatt; N. of Adler Pass.
Rothhorn . . .	3262	10,702	W. by N. of St. Niklaus; S. of Jungpass.
Rothhorn or **Moming** .	4223	13,855	S.W. by W. of Randa; W. of Täsch; S. of Momingpass.
Rothhorn, Ober . .	3418	11,214	E. by N. of Zermatt.
Rothhorn, Unter . .	3106	10,190	E. of Zermatt.
Schallihorn . . .	3978	13,051	W.S.W. of Randa; S. of Schallijoch; N. of Momingpass.
Schwarzhorn . .	2805	9203	W. of Saas-Fée.
Schwarzhorn . .	3204	10,512	W. of Kalpetran; N. of Augstbordpass.
Seethalhorn . . .	3038	9967	E. of St. Niklaus.
Signalkuppe (Mte. Rosa)	4561	14,964	Head of the Grenz Glacier.
Sparrhorn . . .	2990	9810	W. by N. of St. Niklaus.
Steinthalhorn . .	3113	10,213	N.W. of St. Niklaus; S. of Augstbordpass.
Stellihorn . . .	3415	11,204	W. by S. of St. Niklaus.
Stockhorn . . .	3534	11,595	E.S.E. of Zermatt; W. of Stockhornpass.
Stockje . . .	3097	10,161	W. by S. of Zermatt.
Strahlbett or **Kienhorn**	3755	12,320	W.S.W. of the Täschhorn.
Strahlhorn . . .	4191	13,750	E. by S. of Zermatt; S.E. of Adlerpass.
Süd-Lenzspitze . .	4300	14,108	E. of Randa; N. of Nadeljoch.
Täschhorn . . .	4498	14,757	E.S.E. of Randa; E. by N. of Täsch; S. of Domjoch.
Tête Blanche . . .	3750	12,303	W. by S. of Zermatt; N. of Col de Valpelline.
Tête du Lion . .	3723	12,215	Between the Matterhorn and the Dent d'Hérens.
Tête de Valpelline .	3813	12,510	W.S.W. of Zermatt; S. of Col de Valpelline.
Theodúlhorn . .	3472	11,391	S.S.W. of Zermatt.
Trifthorn . . .	3737	12,261	N.W. by W. of Zermatt; N. of Triftjoch.
Ulrichshorn . . .	3929	12,891	E.N.E. of Randa; S. of Riedpass.
Wasenhorn . . .	3340	10,958	W. ½ S. of St. Niklaus.
Weisse Egg . . .	3168	10,394	N.W. by W. of St. Niklaus.
Weisshorn . . .	4512	14,803	W. of Randa.
Wellenkuppe . .	3910	12,828	N.W. by W. of Zermatt.
Zinal, Pointe de . .	3806	12,487	W. ½ N. of Zermatt; W. of Col Durand.
Zumsteinspitze (Monte Rosa)	4573	15,004	Head of the Grenz Glacier.

F.—Passes in the Basin of the Valley of ZERMATT and its Environs.

Name of Pass.	Height in Mètres.	Height in Feet.	Position of Summit.
Adlerpass	3798	12,461	Between the Strahlhorn and Rimpfischhorn.
Allalinpass	3570	11,713	Between the Allalinhorn and Rimpfischhorn.
Alphubeljoch	3802	12,474	Between the Alphubel and Allalinhorn.
Antronapass	2844	9331	E. by S. of Mattmark See.
Arbenjoch	3650	11,975	Between Ober Gabelhorn and Mont Durand (Arbenhorn).
Augstbordpass	2893	9492	Between the Schwarzhorn and Steinthalhorn.
Biesjoch	3549	11,644	Between the Bieshorn and Brunnegghorn.
Breuiljoch	about	10,900	At the head of the Furgg Glacier: S.E. of the Matterhorn.
Brunneggjoch	3383	11,099	N.W. of the Brunnegghorn.
Domjoch	4286	14,062	Between the Dom and Täschhorn.
Durand, Col	3474	11,398	Between the Dent Blanche and Mont Durand (Arbenhorn).
Feejoch.	3812	12,507	W.N.W. of the Allalinhorn.
Felikjoch	4068	13,347	Between Castor and the Lyskamm.
Ferrichlücke	2889	9479	Between the Platthorn and Ferrichhorn.
Fillarjoch	?	?	Between the Fillarhorn and Jägerhorn.
Furggjoch	about	10,900	At the head of the Furgg Glacier; S.E. of the Matterhorn.
Gabelhornpass	about	10,170	Between the Gabelhorn and Platthorn.
Galenpass	3240	10,630	Between the Galenhorn and Dürrenhorn.
Ginanzthalpass	2912	9554	E. of Dreizehnenhorn.
Hérens, Col d'	3480	11.418	N.E. of the Tête Blanche.
Hohbergpass	?	?	Between the Dürrenhorn and Hohberghorn.
Jägerjoch	?	?	Between the Nord End (Monte Rosa) and Jägerhorn.
Jungpass	2994	9823	Between the Furggwanghorn and Rothhorn.
Langenfluhpass	3200	10,499	Between the Fluhhorn and Rimpfischhorn.

Name of Pass.	Height in Mètres.	Height in Feet.	Position of Summit.
Laquinjoch . . .	3497	11,473	S. of Laquinhorn ; N. of Weissmies.
Lion, Col du . . .	3577	11,736	Between the Tête du Lion and Matterhorn. The height is according to the Italian Map scale $\frac{1}{50000}$.
Lysjoch . . .	about	14,000	Between the Lyskamm and Ludwigshöhe (Monte Rosa).
Mischabeljoch . .	3856	12,651	Between the Täschhorn and Alphubel.
Momingpass . .	3793	12,444	Between the Schallihorn and Rothhorn (Moming).
Mondellipass . .	2841	9321	Head of Saasthal, a little E. of Monte Moro.
Moro, Monte (Passo del Moro)	2862	9390	Between Saas Thal and Macugnaga.
Nadeljoch . . .	4167	13,672	Between the Nadelhorn and Dom.
Ofenthalpass . .	2838	9311	N.E. of Monte Moro.
Piodejoch . . .	?	?	Between the Parrotspitze and Ludwigshöhe.
Riedpass . . .	about	11,900	Between the Balfrin (Balenfirn) and Ulrichshorn.
Rossbodenpass . .	?	?	N. by W. of the Fletschhorn.
Schallijoch . . .	3751	12,307	Between the Schallihorn and Weisshorn.
Schallijoch, Ober .	3745	12,287	Between the Schallihorn and Momingpass.
Schwarzberg Weissthor	3600	11,811	Between the Strahlhorn and Cima di Roffel.
Schwarzthor . .	3741	12,274	Between the Breithorn and Pollux.
Sesiajoch . . .	4411	14,472	Between the Parrotspitze and Signalkuppe.
Silbersattel . . .	4490	14,731	Between the Nord End and Höchste Spitze (Monte Rosa).
Simelipass . . .	3028	9934	E. of Eisten (Saasthal).
Sirwoltenpass . .	2664	8740	Head of Gamserthal, east side.
Stockhornpass . .	3415	11,204	E. of the Stockhorn, between the Findelen and Gorner Glaciers.
Theodulpass or **Matterjoch**	3322	10,899	Between the Theodulhorn and Klein Matterhorn (Petit Mont Cervin).
Tiefenmattenjoch .	3593	11,788	Between the Tête de Valpelline and Dent d'Hérens (Mont Tabor).
Tournanche, Col de .	3468	11,378	Between the Dent d'Hérens and the Tête du Lion.
Triftjoch . . .	3540	11,614	Between the Trifthorn and Wellenkuppe.
Valpelline, Col de .	3562	11,687	Between the Tête Blanche and the Tête de Valpelline.

Name of Pass.	Height in Mètres.	Height in Feet.	Position of Summit.
Weisshorn Pass . .	?	?	Between the Weisshorn and the Bieshorn.
Weissthor, New .	3600	11,811	Between Cima di Jazzi and Cima di Rolfel.
Weissthor, Old . .	3576	11,733	Between Cima di Jazzi and the Fillarhorn.
Zinaljoch . . .	3500	11,483	Between the Dent Blanche and the Pointe de Zinal.
Zwillingspass . .	3861	12,668	Between Pollux and Castor.
Zwischbergenpass .	3218	10,656	Between the Weissmies and Portjengrat.



A MOUNTAIN-CLIMBER (1898).

G.—List of Guides of Zermatt, Täsch, Randa, St. Nicholas, Stalden, Visp, Saas, etc.

[Those marked with an asterisk speak English.]

*Andenmatten Adolph (*Almagell*).
Andenmatten Basil (*Eisten*).
Andenmatten Moritz (*Stalden*).
Andenmatten Polycarp (*Stalden*).
*Andenmatten Xavier (*Almagell*).
Anthamatten Aloys (*Balen*).
Anthamatten Aloys (*Stalden*).
Anthamatten Franz (*Saas Grund*).
Anthamatten Joh.-Jos. (*Saas-Fée*).
Anthamatten J.-Peter (*Saas Grund*).
*Anthamatten Roman (*Saas Grund*).
*Aufdenblatten Emmanuel (*Zermatt*).
*Aufdenblatten Johann (*Zermatt*).
Aufdenblatten Max (*Zermatt*).
Aufdenblatten Séverin (*Täsch*).
*Biener Alois (*Zermatt*).
Biener David (*Zermatt*).
Biener Elias (*Zermatt*).
*Biener Franz (*Zermatt*).
*Biener Franz (*Zermatt*).
*Biener Ignaz (*Zermatt*).
*Biener Joseph (*Zermatt*).
*Biener Joseph (*Zermatt*).
*Biener Joseph-Lorenz (*Zermatt*).
*Biener Peter-Anton (*Zermatt*).
*Biener Raphael (*Zermatt*).
*Biener Theodul (*Zermatt*).
Biener Theodul (*Zermatt*).
Biffiger Jos.-Marie (*St. Nicholas*).
Brantschen Adolph (*Randa*).
Bumann Gottfried (*Randa*).
Burgener Alexander père (*Eisten*).
Burgener Alexander fils (*Eisten*).
*Burgener Alois (*Eisten*).
Burgener Franz (*Eisten*).
Burgener Fridolin (*St. Nicholas*).
Burgener Elias (*Saas Grund*).
*Burgener Emmanuel (*Balen*).
Burgener Heinrich (*Eisten*).
Burgener Peter-Joseph (*Almagell*).
Burgener Siegfried (*Eisten*).
Carlen Raphael (*Törbel*).
Chanton Peter-Ludwig (*St. Nicholas*).
Emesch Joseph (*Zeneggen*).
Emesch Victus (*Zeneggen*).
Furrer Ferdinand (*Eisten*).
Furrer Joseph (*Eisten*).
Fux François (*St. Nicholas*).
Fux Joseph-Marie (*St. Nicholas*).
*Gentinetta August (*Zermatt*).
*Gentinetta Emil (*Glis*).
Gentinetta Joseph (*Glis*).
Graven Adolph (*Zermatt*).
Graven Joseph (*Zermatt*).
*Graven Emil (*Zermatt*).
Gruber Alphons (*St. Nicholas*).
*Guntern Alexander (*Zermatt*).
Imboden Alois (*St. Nicholas*).
Imboden Felix (*Täsch*).
Imboden Ferdinand (*Täsch*).
Imboden Friedrich (*Täsch*).
*Imboden Joseph (*St. Nicholas*).
Imboden Nicholas (*St. Nicholas*).
Imboden Peter-Joseph (*St. Nicholas*).
Imboden Theodul (*St. Nicholas*).
Imboden Theophil (*St. Nicholas*).
*Imseng Abraham (*Saas-Fée*).
*Imseng Aloys (*Saas-Fée*).
*Imseng Emil (*Saas-Fée*).
*Inderbinen Moritz (*Zermatt*).
*Julen Elias (*Zermatt*).
*Julen Emmanuel (*Zermatt*).
*Julen Felix (*Zermatt*).
*Julen Gabriel (*Zermatt*).
*Julen Hieronymus (*Zermatt*).
*Julen Isidor (*Zermatt*).
Julen Joseph-Marie (*Zermatt*).
Julen Julius (*Zermatt*).

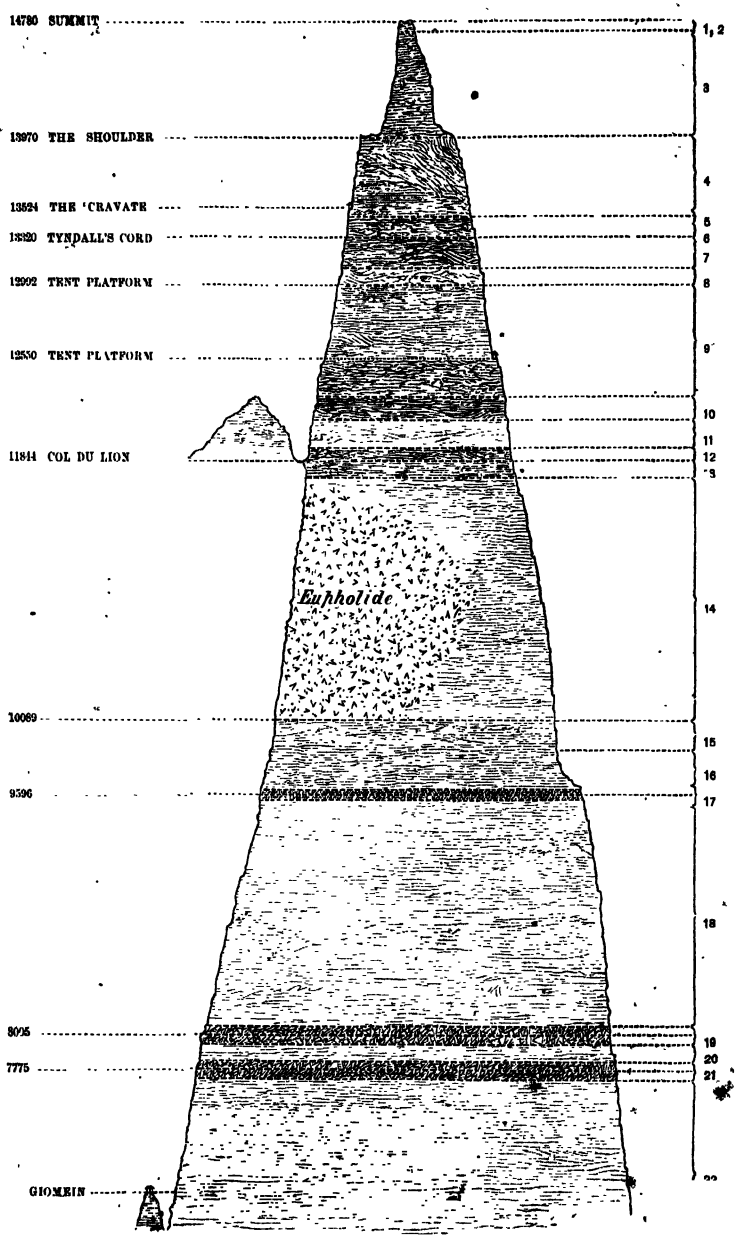
N.B.—The names in this List are not included in the Index.

KALBERMATTEN Joseph (*Almagell*).
KALBERMATTEN Alois (*Balen*).
KALBERMATTEN Emman. (*Saas Grund*).
KARLEN Polycarp (*Törbel*).
KNUBEL Peter (*St. Nicholas*).
*KRONIG Aloys (*Zermatt*).
*KRONIG Fridolin (*Zermatt*).
*KRONIG Jos.-Marie (*Zermatt*).
*KRONIG Leopold (*Täsch*).
*KRONIG Mathias (*Zermatt*).
LAGGER Alfred (*St. Nicholas*).
LAGGER Jos.-Marie (*St. Nicholas*).
*LAUBER Alexander (*Zermatt*).
*LERJEN Aloys (*Täsch*).
LERJEN Johann (*Täsch*).
*LOCHMATTER Jos.-Marie (*St. Nicholas*).
LOCHMATTER Joseph (*St. Nicholas*).
*LOCHMATTER Julius (*St. Nicholas*).
LOCHMATTER Raphael (*St. Nicholas*).
MOSER Fridolin (*Täsch*).
MOSER Joseph (*Täsch*).
*MOSER Joseph (*Zermatt*).
MOSER Léo (*Täsch*).
MOSER Robert (*Täsch*).
*PERREN Adolph (*Zermatt*).
*PERREN Emil (*Zermatt*).
PERREN Clemens (*Randa*).
*PERREN David (*Zermatt*).
PERREN Franz (*Zermatt*).
PERREN Fridolin (*Randa*).
*PERREN Hermann (*Zermatt*).
*PERREN Peter, 1882 (*Zermatt*).
*PERREN Hans-Peter, 1886 (*Zermatt*).
*PERREN Peter-Anton (*Zermatt*).
PFAMATTER Dionys (*Zeneggen*).
POLLINGER Alois père (*St. Nicholas*).
*POLLINGER Alois fils (*St. Nicholas*).
*POLLINGER Joseph (*St. Nicholas*).
RUPPEN Aloys (*Saas Grund*).
RUPPEN Peter (*Visp*).
SARBACH Peter (*St. Nicholas*).
*SCHALLER Adolph (*Randa*).
*SCHALLER Joseph (*Randa*).
SCHANTON Jos.-Marie (*St. Nicholas*).
*SCHWARZEN Heinrich (*Randa*).
SCHWARZEN Quirinus (*Randa*).
SCHWARZEN Wilhelm (*Randa*).
SIGRIST Joseph (*Zermatt*).
SUMMERMATTER Alph. (*Randa*).
SUMMERMATTER Ferdinand (*Randa*).
SUMMERMATTER Friedrich (*Randa*).
SUMMERMATTER Johann (*Randa*).
*SUPERSAXO Albert (*Balen*).
*SUPERSAXO Aloys (*Saas-Fée*).
SUPERSAXO Alphons (*Saas-Fée*).
*SUPERSAXO Ambros (*Saas-Fée*).
SUPERSAXO Ambros (*Saas-Fée*).
SUPERSAXO Anton (*Saas-Fée*).
*SUPERSAXO Benedikt (*Saas-Fée*).
SUPERSAXO Johann-Peter (*Saas-Fée*).
SUPERSAXO Ludwig (*Saas-Fée*).
SUPERSAXO Peter-Joseph (*Saas-Fée*).
*TAUGWALDER Gabriel (*Zermatt*).
*TAUGWALDER Heinrich (*Zermatt*).
*TAUGWALDER Joseph (*Zermatt*).
*TAUGWALDER Rudolph (*Zermatt*).
TAUGWALDER Theodor (*Zermatt*).
TRUFFER Aloys (*Randa*).
TRUFFER Aloys (*Randa*).
TRUFFER Fridolin (*Randa*).
TRUFFER Joseph (*St. Nicholas*).
*TRUFFER Joseph (*Randa*).
TRUFFER Julius (*Randa*).
TRUFFER Léo (*St. Nicholas*).
TRUFFER Peter-Joseph (*St. Nicholas*).
TRUFFER Samuel (*Randa*).
VENETZ P.-Joseph (*Stalden*).
WILLISCH Joseph (*Täsch*).
ZEN-KLUSEN Kaspar (*Glis*).
ZUBER Franz (*Randa*).
ZUBER Peter (*Randa*).
*ZUM-TAUGWALD Gabriel (*Zermatt*).
*ZUM-TAUGWALD Julius (*Zermatt*).
*ZUM-TAUGWALD Mathi (*Zermatt*).
*ZUM-TAUGWALD Mathias (*Zermatt*).
ZUM-TAUGWALD Sebastian (*Randa*).
ZURBRIGGEN Aloys (*Saas Grund*).
ZURBRIGGEN Clemens (*Saas Grund*).
ZURBRIGGEN Daniel (*Saas-Fée*).
ZURBRIGGEN Franz (*Saas Grund*).

H.—Railway Fares to or from Zermatt.

	Single Fare			Return Fare		
	I	II	III	I	II	III
Aarau via Bienne	48 85	39 05	26 45	80 55	64 15	42 70
Aigle	26 20	23 15	15 10	45 10	40 25	26 15
Bâle via Bienne	50 35	40 10	27 20	83 75	66 45	44 20
,, ,, Berne	51 85	41 15	27 95	85 —	66 85	44 40
Berne	40 35	33 10	22 20	67 75	56 15	37 50
Bex	25 40	22 60	14 70	43 80	39 35	25 50
Bienne	41 —	33 55	22 50	68 75	56 85	38 —
Bouveret	27 35	23 95	15 70	46 95	41 55	27 10
Brigue	16 95	16 65	10 50	30 30	29 85	18 75
Chaux-de-Fonds via Sonceboz	45 45	36 65	24 75	75 90	61 85	41 55
Clarens	27 85	24 35	15 95	47 80	42 15	27 50
Delémont	46 30	37 25	25 15	77 25	62 80	42 25
Fribourg	37 15	30 85	20 55	62 60	52 55	34 90
Genève	36 50	30 40	20 25	61 60	51 80	34 40
Herzogenbuchsee via Berne	44 65	36 10	24 35	74 20	60 15	40 10
Lausanne	30 25	26 —	17 15	51 60	44 80	29 40
Loèche	18 10	17 50	11 05	32 15	31 15	19 70
Lucerne via Langnau	50 25	40 05	27 10	83 55	67 25	45 —
Martigny	23 40	21 20	13 70	40 65	37 10	23 90
Montreux	27 75	24 25	15 90	47 60	42 —	27 40
Morat	—	31 65	21 15	—	53 80	35 80
Neuchâtel	37 95	31 40	21 —	63 95	53 45	35 55
Olten via Neuchâtel	47 45	38 05	25 75	78 45	62 85	41 90
,, ,, Berne ou Neuchâtel-Bienne	47 55	38 15	25 80	78 55	62 85	41 85
St. Maurice	24 95	22 30	14 50	43 15	38 85	25 15
Saxon	22 45	20 55	13 25	39 15	36 05	23 15
Sion	20 70	19 30	12 35	36 30	34 05	21 75
Soleure (Vieux) via Neuchâtel	43 60	35 35	23 80	72 65	59 25	39 55
,, ,, ,, Berne-Lyss-Buren	—	36 80	24 85	—	61 45	41 10
,, (Nouveau) via Neuchâtel	43 70	35 45	23 85	72 80	59 35	39 65
,, ,, ,, Berne-Lyss-Buren	—	36 75	24 80	—	61 35	41 05
Territet	27 55	24 10	15 80	47 30	41 80	27 25
Thoune via Berne	43 70	35 45	23 90	72 75	59 25	39 50
Vallorbe	35 05	29 35	19 55	59 25	50 20	33 25
Vevey	28 40	21 70	16 20	48 60	42 70	27 90
Viège	—	16 —	10 —	—	28 80	18 —
Yverdon	34 20	28 80	19 10	57 95	49 25	32 60

GEOLOGICAL SECTION OF THE MATTERHORN, BY SIGNOR F. GIORDANO.



I.—On the Geology of the Matterhorn,

By Signor F. Giordano, Ingénieur en Chef des Mines d'Italie, etc.

References to the Geological Section of the Matterhorn.

I. Gneiss talqueux quartzifère. Beaucoup de traces de foudres.

II. Banc de 3 à 4 mètres de schistes serpentineux et talqueux verts.

III. Gneiss talqueux à éléments plus ou moins schisteux, avec quelque lit de quartzite.

„ Gneiss et micaschistes ferrugineux à éléments très-fins, beaucoup de traces de foudre.

IV. Gneiss alternant avec des schistes talqueux et à des felsites en zones blanches et grises.

V. Petite couche de schistes serpentineux, vert sombre.

VI. Gneiss et micaschiste avec zones quartzifères rubanées.

VII. Gneiss talqueux à éléments schisteux.

VIII. *Id.* *id.* verdâtre, porphyroïde à éléments moyens.

IX. Gneiss talqueux granitoïde à gros éléments et avec des cristaux de feldspath.

X. Schistes grisâtres.

XI. Micaschistes ferrugineux.

XII. Gneiss talqueux vert sombre.

XIII. Gneiss et schistes quartzeux, couleur vert clair.

XIV. Euphotide massive (feldspath et diallage) à éléments cristallins bien développés, traversée par des veines d'eurite blanchâtre. Cette roche forme un banc ou plutôt une lentille de plus de 500 mètres de puissance intercalée au gneiss talqueux.[1]

XV. Gneiss talqueux alternant avec des schistes talqueux et micacés.

XVI. Schistes compactes couleur vert clair.

XVII. Calcaire cristallin micacé (calcschiste) avec veines et rognons de quartz. Il alterne avec des schistes verts chloriteux et serpentineux.

XVIII. Schistes verts chloriteux, serpentineux et talqueux, avec des masses stéatiteuses.

XIX. Calcschistes (comme ci-dessus) formant un banc de plus de 100 mètres.[2]

XX. Schistes verts chloriteux.

XXI. Calcschistes (comme ci-dessus).

XXII. Il suit ci dessous une série fort puissante de schistes verts serpentineux, chloriteux, talqueux et stéatiteux alternant encore avec des calcschistes. En plusieurs localités les schistes deviennent très-amphibologiques à petits cristaux noirs. Cette puissante formation calcaréo-serpentineuse repose inférieurement sur des micaschistes et des gneiss anciens.

[1] Cette roche granitoïde paraît surtout à la base ouest du pic sous le col du Lion tandis qu'elle ne paraît pas du tout sur le flanc est où elle paraît passer au gneiss talqueux.

[2] En plusieurs localités des environs, cette zone calcarifère présente des bancs et des lentilles de dolomie, de cargneule, de gypse et de quartzites.

J.—Inscribed Stones near Zermatt.

In the early part of 1898, Mons. B. Reber communicated to me two articles entitled *Monuments préhistoriques et légendes de Zermatt* which he had contributed to the Geneva periodical called *Le Valais Romand*. The principal part of these articles is occupied by descriptions of two large slabs of rock, situated upon slopes above the Village of Zmutt, near Zermatt, which bear what M. Reber considers '*sculptures préhistoriques*.' I had not previously heard of these 'monuments.' My introduction to them is entirely due to M. Reber.

I visited them at the end of August, 1898, and found that his stone No. 1 was a slab of mica-schist, 10 feet long by 7 ft. 6 in. broad, and about 2 ft. 4 in. thick, partly imbedded in the soil, at an elevation of about 7300 feet above the sea, on the slopes to the north-east of Zmutt, from which place it can be reached in a little more than half an hour. The uppermost surface is unusually flat, for so large a slab; and there are upon it about 100 hollows. The largest is 8 inches and the smaller ones are about 2 inches in diameter, and their depth varies from a little more than half an inch to more than 3 inches. Some are grouped, that is to say have connecting channels or grooves.

In September, 1895, M. Reber was endeavouring to revisit his slab No. 1; and, while searching for it, discovered another large slab and a smaller one not very far away, that were, he said, "entirely covered with *sculptures préhistoriques*, among which some quite new figures, unknown until now in prehistoric archæology, seem of the first importance for the study of these mysterious monuments. If these signs have, for example, a signification of the nature of Egyptian hieroglyphics, then our two new stones would represent veritable prehistoric archives of the district."

The larger of these two 'monuments' is distant only a few minutes' walk from M. Reber's No. 1. It is situated at a height of about 6900 feet above the sea, on a bit of grassy land, a third of a mile or so to the south-west of the Châlets of Hubel, between two ranges of cliffs which face the south-east, and can be reached from Zermatt in an hour, going by way of these châlets. It is a flat slab of rather fine-grained gneiss, almost completely imbedded in the ground, and is covered with signs or inscriptions of various sorts; many of which are quite recent, and are, as M. Reber points out, initials and other marks scratched by tourists or by people of the country. These superficial markings or scratches have no depth, and underneath them there are the signs or characters that M. Reber terms prehistoric, and which he conjectures may prove to be 'veritable prehistoric archives of the district.' In regard to that there may be difference of opinion. Whatever they should be called, they are, I think, worthy of the attention of experts.

Mètres.	Feet.	Mètres.	Feet.	Mètres.	Feet.
1 =	3·28	50 =	164·04	100 =	328·09
2	6·56	51	167·33	200	656·18
3	9·84	52	170·61	300	984·27
4	13·12	53	173·89	400	1312·36
5	16·40	54	177·17	500	1640·45
6	19·69	55	180·45	600	1968·54
7	22·97	56	183·73	700	2296·63
8	26·25	57	187·01	800	2624·72
9	29·53	58	190·29	900	2952·81
		59	193·57		
10	32·81			1000	3280·90
11	36·09	60	196·85	1100	3608·99
12	39·37	61	200·13	1200	3937·08
13	42·65	62	203·42	1300	4265·17
14	45·93	63	206·70	1400	4593·26
15	49·21	64	209·98	1500	4921·35
16	52·49	65	213·26	1600	5249·44
17	55·78	66	216·54	1700	5577·53
18	59·06	67	219·82	1800	5905·62
19	62·34	68	223·10	1900	6233·71
		69	226·38		
20	65·62	70	229·66	2000	6561·80
21	68·90	71	232·94	2100	6889·89
22	72·18	72	236·22	2200	7217·98
23	75·46	73	239·51	2300	7546·07
24	78·74	74	242·79	2400	7874·16
25	82·02	75	246·07	2500	8202·25
26	85·30	76	249·35	2600	8530·34
27	88·58	77	252·63	2700	8858·43
28	91·87	78	255·91	2800	9186·52
29	95·15	79	259·19	2900	9514·61
30	98·43	80	262·47	3000	9842·70
31	101·71	81	265·75	3100	10,170·79
32	104·99	82	269·03	3200	10,498·88
33	108·27	83	272·31	3300	10,826·97
34	111·55	84	275·60	3400	11,155·06
35	114·83	85	278·88	3500	11,483·15
36	118·11	86	282·16	3600	11,811·24
37	121·39	87	285·44	3700	12,139·33
38	124·67	88	288·72	3800	12,467·42
39	127·96	89	292·00	3900	12,795·51
40	131·24	90	295·28	4000	13,123·60
41	134·52	91	298·56	4100	13,451·69
42	137·80	92	301·84	4200	13,779·78
43	141·08	93	305·12	4300	14,107·87
44	144·36	94	308·40	4400	14,435·96
45	147·64	95	311·69	4500	14,764·05
46	150·92	96	314·97	4600	15,092·14
47	154·20	97	318·25	4700	15,420·23
48	157·48	98	321·53	4800	15,748·32
49	160·76	99	324·81	4900	16,076·41

One Mètre = 3·2808992 English Feet (*Annuaire des Longitudes*, Paris).

FEET.		MÈTRES.	FEET.		MÈTRES.	FEET.		MÈTRES.
1	=	0·30	3300	=	1005·82	8300	=	2529·79
2		0·61	3400		1036·30	8400		2560·27
3		0·91	3500		1066·78	8500		2590·75
4		1·22	3600		1097·26	8600		2621·23
5		1·52	3700		1127·74	8700		2651·71
6		1·82	3800		1158·22	8800		2682·19
7		2·13	3900		1188·70	8900		2712·67
8		2·43	4000		1219·18	9000		2743·15
9		2·74	4100		1249·66	9100		2773·63
10		3·01	4200		1280·14	9200		2804·11
20		6·09	4300		1310·62	9300		2834·59
30		9·14	4400		1341·10	9400		2865·07
40		12·19	4500		1371·58	9500		2895·55
50		15·21	4600		1402·05	9600		2926·03
60		18·29	4700		1432·53	9700		2956·51
70		21·34	4800		1463·01	9800		2986·99
80		24·38	4900		1493·49	9900		3017·47
90		27·43	5000		1523·97	10,000		3047·94
100		30·48	5100		1554·45	10,100		3078·42
200		60·96	5200		1584·93	10,200		3108·90
300		91·44	5300		1615·41	10,300		3139·38
400		121·91	5400		1645·89	10,400		3169·86
500		152·40	5500		1676·37	10,500		3200·34
600		182·88	5600		1706·85	10,600		3230·82
700		213·36	5700		1737·33	10,700		3261·30
800		243·84	5800		1767·81	10,800		3291·78
900		274·31	5900		1798·29	10,900		3322·26
1000		301·79	6000		1828·77	11,000		3352·74
1100		335·27	6100		1859·25	11,100		3383·22
1200		365·76	6200		1889·73	11,200		3413·70
1300		396·23	6300		1920·21	11,300		3444·18
1400		426·71	6400		1950·68	11,400		3474·66
1500		457·19	6500		1981·16	11,500		3505·14
1600		487·67	6600		2011·64	11,600		3535·62
1700		518·15	6700		2042·12	11,700		3566·10
1800		548·63	6800		2072·60	11,800		3596·57
1900		579·11	6900		2103·08	11,900		3627·05
2000		609·59	7000		2133·56	12,000		3657·53
2100		640·07	7100		2164·04	12,100		3688·01
2200		670·55	7200		2194·52	12,200		3718·49
2300		701·03	7300		2225·00	12,300		3748·97
2400		731·51	7400		2255·48	12,400		3779·45
2500		761·99	7500		2285·96	12,500		3809·93
2600		792·47	7600		2316·44	12,600		3840·41
2700		822·94	7700		2346·92	12,700		3870·89
2800		853·42	7800		2377·40	12,800		3901·37
2900		883·90	7900		2407·88	12,900		3931·85
3000		914·38	8000		2438·36	13,000		3962·33
3100		944·86	8100		2468·84	14,000		4267·12
3200		975·34	8200		2499·31	15,000		4571·92

One English Foot = 3·0479449 décimètres (*Annuaire des Longitudes*, Paris).

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THE END.

ZWILLINGS-PASS, 12,668 | POLLUX 13,432 | SCHWARZTHOR 12,274 | EASTERN END OF THE BREITHORN



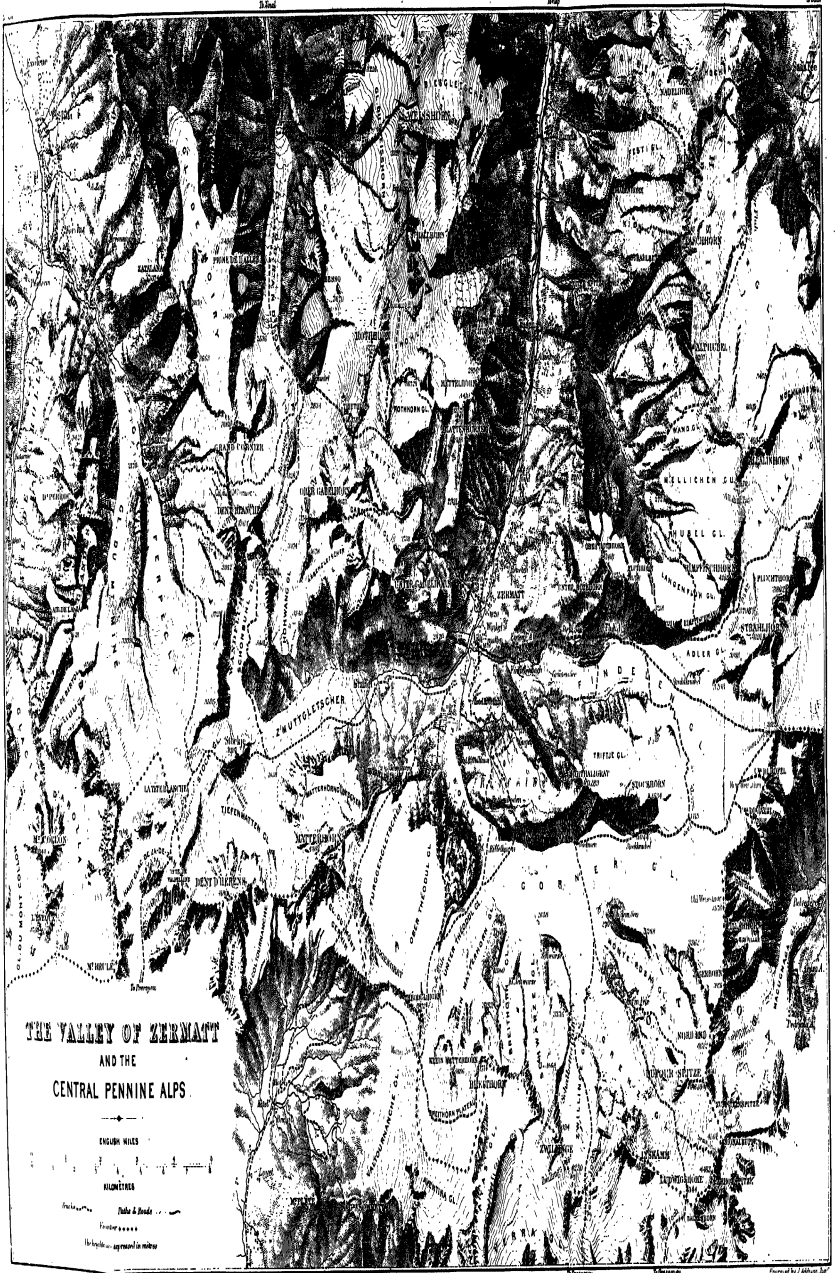
SCHWARZE GLACIER

GORNER GLACIER



THE VIEW FROM THE GORNERGRAT (10,289 FEET), LOOKING SOUTH.


TO THE COL DE VALPELLINE
TO THE GORNERGRAT
MATTERHORN
DENT D'HÉRENS
MONT CERVIN
THÉODULHORN
THE MATTERHORN
AND
ITS GLACIERS
ENGLISH MILES
KILOMETRES
Route
Frontier
The heights are expressed in Metres


THE VALLEY OF ZERMATT
AND THE
CENTRAL PENNINE ALPS.
ENGLISH MILES
KILOMETRES
Paths & Roads
Heights expressed in metres
ZERMATT
ZMUTTGLETSCHER
GORNER GL.
MONTE ROSA
LYSKAMM
CASTOR
POLLUX
BREITHORN
MATTERHORN
DENT D'HERENS
DENT BLANCHE
WEISSHORN
RIMPFISCHHORN
STRAHLHORN
ADLER GL.
TRIFT GL.
STOCKHORN
MONT COLLON
GRAND COMBIN
PETIT COMBIN
MONT VELAN
GRAND CORNIER
MONT BLANC
MONT CERVIN
DOM
TASCHHORN
ALPHUBEL
ALLALINHORN
RIMPFISCHGL.
STRAHLGL.
ADLERGL.
TRIFTGL.
GORNERGL.
ZMUTTGL.
MATTERGL.
FINDELGL.
LEICHBACH GL.
ZINAL GL.
OBER GABELHORN
WELLENKUPPE
MATTMARK SEE
MONTE MORO
MONTE MORO GL.
SCHWARZBERG WEISSTHOR
ZERMATT
TASCH
RANDA
KALPETRAN
VISP
STALDEN
TÄSCHALP
ZINAL
MATTMARK
SAAS
MACUGNAGA
ST NICOLAS
ST JEAN
ST LUC
VISSOIE
GRIMENTZ
SIERRE
SION
MARTIGNY
ST BERNARD
ST PIERRE
ORSIERES
AOSTA
PRE ST DIDIER
COURMAYEUR
CHAMONIX
ARGENTIERE
VALLORCINE
TRIENT
TRIENT GL.
TRIENT PASS
TRIENT HORN
TOUR NOIR
GRANDES JORASSES
DARREY
MONT DOLENT
MONT DOLENT GL.
PETIT DOLENT
PETIT DOLENT GL.
CHARDONNET GL.
ARGENTIERE GL.
MER DE GLACE
TALEFRE GL.
TALEFRE
TORRENT
GLACIER DE TRIENT
GLACIER DE SALANFE
GLACIER DE GIETROZ
GLACIER DE CORBASSIERE
GLACIER DE PANEYROSSE
GLACIER DE MENSUAZ
GLACIER DE MILON
GLACIER DE CROSETTE
GLACIER DE BOVINE
GLACIER DE CHEILON
GLACIER DE ZANFLEURON
GLACIER DE GRAND DESERT
GLACIER DE PLANARD
GLACIER DE CHERMONTANE
GLACIER DE FENETRE
GLACIER DE FRANKEN
GLACIER DE CROSETTE
GLACIER DE BOVINE
GLACIER DE CHEILON
GLACIER DE ZANFLEURON
GLACIER DE GRAND DESERT
GLACIER DE PLANARD
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GLACIER DE FRANKEN

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ZERMATT RAILWAY

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VIÈGE TO ZERMATT,

IS THE MOST PICTURESQUE LINE

* IN THE WORLD. *

AT EVERY POINT IT PRESENTS SCENES OF

* RAVISHING BEAUTY, *

while passing through FORESTS, amid PRECIPICES, or by the side of Foaming TORRENTS, and offers Enchanting Prospects of the most

FAMOUS MOUNTAINS IN THE ALPS.

THE ZERMATT RAILWAY.

VIÈGE TO ZERMATT.

Names of Stations.		Omnib.	Direct.	Omnib.	Omnib.
		A.M.	P.M.	P.M.	*P.M.
Brig (Brigue)	Dép.	6.30	*12.27	2.20	6.08
Visp (Viège)	Arr.	6.42	12.40	2.30	6.19
Lausanne	Dép.	...	9.15	12.05	2.20
Vevey	,,	...	9.40	12.28	2.53
Montreux	,,	...	9.53	12.38	3.08
St. Maurice	,,	...	10.47	1.28	4.18
Sion (Sitten)	,,	...	11.47	2.21	5.35
Visp (Viège)	Arr.	...	12.47	3.21	6.59
VIÈGE (Visp)	Dép.	6.50	1.00	3.40	7.25
STALDEN	Arr.	7.13	1.20	4.00	7.45
	Dép.	7.15	1.25	4.03	7.48
Kalpetran	,,	7.31	1.40	4.18	8.03
St. Niklaus (St. Nicolas)	,,	8.05	2.07	4.45	8.30
Herbriggen	,,	8.28	,,	5.06	8.51
Randa	,,	8.51	2.49	5.28	* 9.13
Tæsch	,,	9.03	,,	5.38	9.23
ZERMATT	Arr.	9.23	3.16	5.57	9.42
For the Gornergrat	Dép.	10.00	*4.00	...	...

* Until September 15. * From July 15 to August 31.

ZERMATT TO VIÈGE.

Names of Stations.		Omnib.	Direct.	Omnib.	Omnib.	
		A.M.	A.M.	A.M.	P.M.	
From the Gornergrat	Arr.	...	9.43	11.27	3.28	
ZERMATT	Dép.	6.40	10.05	11.37	3.35	
Tæsch	,,	7.00	10.24	,,	3.54	6.16
Randa	,,	7.11	10.35	12.06	4.05	6.27
Herbriggen	,,	7.31	10.55	,,	4.25	6.47
St. Niklaus (St. Nicolas)	,,	7.55	11.18	12.19	4.49	7.16
Kalpetran	,,	8.19	11.43	,,	5.14	7.35
STALDEN	Arr.	8.32	11.56	1.25	5.27	7.48
	Dép.	8.35	11.59	1.30	5.30	7.51
VIÈGE (Visp)	Arr.	8.55	12.19	1.50	5.50	8.11
Visp (Viège)	Dép.	9.20	12.47	2.35	6.05	
Sion (Sitten)	Arr.	10.18	2.21	3.27	6.58	
St. Maurice	,,	11.17	3.52	4.18	8.54	
Montreux	,,	12.23	5.20	5.16	10.03	
Vevey	,,	12.41	* 5.33	5.29	10.26	
Lausanne	Arr.	1.15	6.00	5.57	11.10	
Visp (Viège)	Dép.	10.17	12.52*	2.24	7.03	
Brig (Brigue)	Arr.	10.30	1.02	2.40	7.15	

* From July 15 to August 31.

RETURN TICKETS ARE ISSUED AT ALL STATIONS.
BUFFETS AT VIÈGE, STALDEN, AND ZERMATT.

NOTICE.—By a small additional payment, 10 or more holders of 2nd Class Tickets can have "une voiture salon" specially attached to the Trains, with Glazed Platforms, which permit the beauties of the line to be viewed advantageously. Apply to the Chefs de Gare at Viège or at Zermatt.

ARGENTIÈRE (HAUTE SAVOIE).

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4750 feet.] Opened December 1903. [4750 feet.

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Chamois in the Grounds. * Tennis Court.
Sixty-seven Rooms, nearly all varnished in White.
Iron and Copper Beds. * Baths on each floor. * Dark Room.

The Public Rooms and Terraces cover an area of 4230 sq. feet, permitting ample exercise in bad weather.

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Conveyances sent to Chamonix or Argentière if desired.

OPINIONS OF THE PRESS.

"Our pictures, from photos by Tairraz of Chamonix, give a party of English in search of sun and health. The scene is at le Planet, above Argentière, in Haute Savoie, where Aug. Tairraz (whom members of the Alpine Club will well remember at la Bérarde) has built a new hotel. The mountain behind the Hotel is the Aig. Verte. From a height of 4000 to 5000 feet one looks *down* upon Chamonix six miles away, and *up* the whole *massif* of Mont Blanc."—*Bystander*, Jan. 27, 1904.

"The Hotel stands 300 feet *above* Argentière, at the foot of the Col de Balme and the Col de Montet, and at the head of the Chamonix valley. It commands a splendid view of the valley and of the chain of Mont Blanc. The Glacier d'Argentière is within a short walk upon the left. The usual simple expeditions in the neighbourhood are within easy reach, while climbers can find plenty of work to do. The air is exceedingly pure and dry. It is also a charming place for a winter holiday; the complete absence of damp and mist is there very noticeable; in winter the lower valley is at times filled with mist, whilst the Hotel is in bright sunshine. A party of English people who stayed there this winter were able to sleep with windows open and without fires in their rooms. The Hotel is well furnished, and the sanitary arrangements are excellent, having been modelled on English advice. There will be an English service (S.P.G.) at the Hotel this summer."—*An Englishman who has been there.*

The following Gentlemen kindly allow references to be made to them—

Rev. T. C. Fry, D.D., School House, Berkhamsted, Herts; and
Prof. Armitage Smith, Birkbeck College, Chancery Lane, London.

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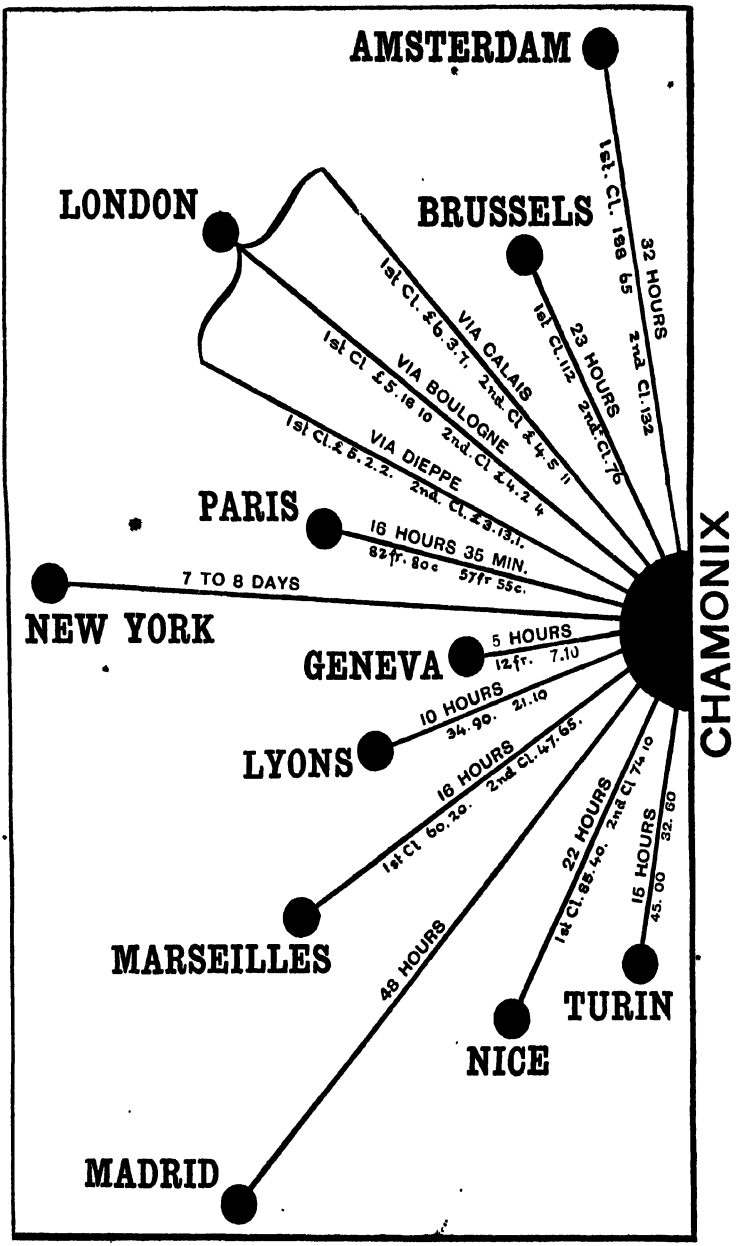
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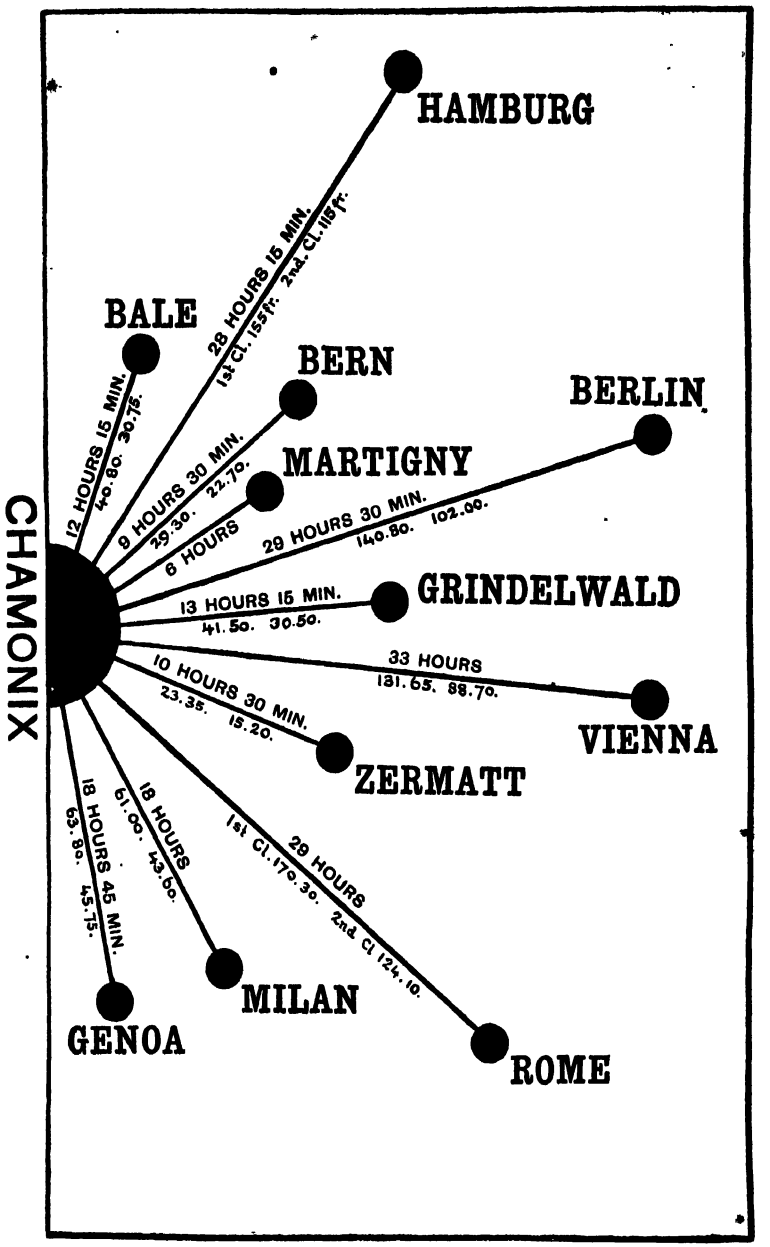
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HOTEL BEAU-RIVAGE, AMI QUAGLIA, *Propriétaire.*

HOTEL BEAU-SITE, CURRAL-COUTTET, *Propriétaire.*

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HOTEL BRISTOL, CLARET-TOURNIER, *Propriétaire.*

HOTELS CACHAT & DU MONT BLANC, CACHAT, *Propriétaire.*

HOTEL CENTRAL, JOSEPH COUTTET, *Propriétaire.*

HOTEL DES CHALETS DE LA CÔTE, HARANG, *Propriétaire.*

GRAND HOTEL COUTTET & DU PARC, HOTEL-PENSION COUTTET, COUTTET-FRÈRES, *Prop.*

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HOTEL DE LA TERRASSE, MME. VVE. THEVENET, *Propriétaire.*

TIME-TABLES OF THE SERVICES

BETWEEN

GENEVA-LE FAYET AND CHAMONIX.

ASCENDING.

Paris, Lyons & Mediterranean Railway		a.m.	a.m.	a.m.	p.m.	p.m.
GENEVA, EAUX-VIVES STATION	dep.	5.48	8.36	10.14	1.32	5.44
LE FAYET	arr.	8.51	11.30	1.7	4.30	8.32
Halt for Refreshment.						
LE FAYET	dep.	not known.				
CHAMONIX	arr.					

DESCENDING.

		a.m.	a.m.	a.m.	p.m.	p.m.
CHAMONIX	dep.	not known.				
LE FAYET	arr.					
Halt for Refreshment.						
LE FAYET	dep.	5.15	9.25	1.12	4.2	7.28
GENEVA, EAUX-VIVES STATION	arr.	8.22	12.22	4.4	6.46	10.17

Alterations may occur in the Train Service. Enquire.

PRICES OF TICKETS BETWEEN STATIONS.

		Single Tickets.		Return Tickets.	
Chamonix to	les Bossons	0.80	0.35	1.20	0.55
Do.	les Houches	1.70	0.75	2.50	1.20
Do.	Servoz	2.80	1.25	4.20	1.95
Do.	Chède	3.70	1.65	5.55	2.60
Do.	le Fayet	4.35	1.90	6.55	3.10

NOTICE.

The hours quoted are French time, which is 55 min. later than Central Europe time.

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SPLENDID HOTEL.

With incomparable views of the Chain of Mont Blanc. The nearest starting-point for the Flégère and the Mer de Glace. Modern Comfort. Electric Light. Baths in the Hotel. Pension from 5 francs a day. Meals at all hours. Near Les Praz Station. Omnibus meets all Trains. **RAVANEL FRÈRES, Guides, Proprietors.**

Near the Post-Office. CHAMONIX. Haute-Savoie.

*** AU PETIT PARIS ***

NOVELTIES * DRESS-MAKING

LARGE SELECTION OF ALL ARTICLES NECESSARY FOR TOURISTS.

* SPECIALITY FOR THE REAL CHAMONIX HONEY *

H. LECHAT.

OPPOSITE TO **CHAMONIX** POST-OFFICE.

A LA RENOMMÉE

Great Depôt for Boots and Shoes, and Tourists' Requisites * Batons and Sticks * Dress-making * Mountain-Skirts, Blouses and Knickerbockers.

* REPAIRS CAREFULLY EXECUTED *

VVE. RMAIN. PAYOT.

HOTEL MODERNE & VICTORIA, CHAMONIX

OPENED IN 1903.

IN THE CENTRE OF THE VILLAGE, WITH A FINE VIEW OF MONT BLANC.

80 ROOMS * LIFT * EVERY CONVENIENCE.

F. PETIT-JEAN, Proprietor.

NEAR CHAMONIX, 2½ MILES FROM LES HOUCHES.

HOTEL-PENSION DE BELLEVUE,

On the Route for Mont Blanc and for the Tour of Mont Blanc. Exceptionally Fine Views of the Chain of Mont Blanc and the Valley of Chamonix * 45 Beds * Pension from 6 Francs.

The Brothers FRÉDÉRIC & ALPHONSE PAYOT, Guides, Proprietors.

CHAMONIX.

ENGLISH AND AMERICAN BAR,

SITUATED ON THE PRINCIPAL PLACE;

With all Sorts of English and American Drinks.

WHISKEY AND SCHWEPPE'S SODA, ENGLISH BEER, HORNIMAN'S TEA, ETC. ETC.

* *The Best Drinks in the Town.* * FÉLISAZ, Barman.

CHAMONIX (RUE NATIONALE, OPPOSITE TO THE HOTEL DE LA CROIX BLANCHE).

J. DUCREY, Shoemaker

Medal at the International Alpine Exhibition, Grenoble, 1892.
SPECIAL MENTION FOR MOUNTAIN BOOTS.
Articles for Excursions * Simond's Piolets (Ice-Axes) kept in Stock.
REPAIRS PROMPTLY EXECUTED.

CHAMONIX, near the Bridge.

AUGUSTE GOIZE,

HAIR-DRESSER * BARBER.
TOURISTS' REQUISITES * PERFUMERY * ENGLISH SPOKEN.
Depot for the 'Veritable' Eau de Cologne.

CHAMONIX (in the Centre of the Town).

A. SIMOND & BROTHERS,

MEMBERS OF THE CLUB-ALPIN FRANÇAIS,

MANUFACTURERS OF ICE-AXES (PIOLETS) FOR ALPINISTS,
AND BELLS (SONNETTES) FOR CATTLE, IN ENGLISH CAST-STEEL.

GOODS TO ORDER CAREFULLY FORWARDED, and
Special Sketches made. Piolets from 12 to 20 francs.
Alpenstocks from 3 to 5 francs.

Honours Gained: PARIS, 1er Prix, 1889;
GRENOBLE, 1er Prix, 1892; LYON, 1er Prix, 1894.

HOTEL-PENSION DE LA FLÉGÈRE.

La Flégère (1900 metres), 2½ hours from Chamonix, occupies an unique position for viewing the entire Chain of Mont Blanc and the Valley, fronting the Mer de Glace. * 15 Bedrooms. * Starting-point for numerous Excursions, such as Le Belvédère, La Floriaz (with a similar view to that from the Buet, etc. etc. * Attentive Service. * English spoken. * The new path is now open.

DUCREY, Proprietor.

CHAMONIX, Rue Nationale.

F. FÉLISAZ

KEEPS PROVISIONS AND COMESTIBLES IN GENERAL; CROSSE & BLACKWELL'S AND HUNTLEY & PALMER'S GOODS; IRISH AND SCOTCH WHISKY; LIEBIG (LEMCO); MAGGI; PATÉS; PUDDINGS; CAKES AND CONFECTIONERY; BONBONS; AND EVERYTHING THAT IS NICE.

Patronised by Members of the Alpine Club.

CHAMONIX.

LA REVUE DU MONT-BLANC

Gives Time-tables of the Railways and other means of communication in all the districts including AIX-LES-BAINS, LYONS, INTERLAKEN, BRIGUE and ZERMATT; and on every Thursday chronicles the most interesting ascents which have been made in the previous week.

CHAMONIX (Place de la Fontaine)

AU GRAND MAGASIN DU MONT BLANC,

Kept by AUG. COUTTET, Photographer.

PORTRAITS, GROUPS, AND LANDSCAPES OF ALL SIZES * ALBUMS * MATERIALS AND DARK ROOM FOR AMATEURS * WOOD CARVINGS, POLISHED STONES, JEWELLERY, & ORNAMENTAL OBJECTS OF ALL KINDS BOOKS, STATIONERY, & ILLUSTRATED POST CARDS * DRAWING MATERIALS FOR OIL OR WATER-COLOUR.

CHAMONIX.

THE ATELIER OF TAIRRAZ "THE PHOTOGRAPHER OF CHAMONIX" IS NEAR THE ENGLISH CHURCH.

PORTRAITS, GROUPS, AND VIEWS ARE TAKEN BY

TAIRRAZ

Who has a Large Assortment of Views in Stock of the Aiguilles and Glaciers of the Range of Mont Blanc, and in Dauphiné.

PRINTING DONE * ALL ORDERS PROMPTLY EXECUTED.

CHAMONIX AND MONT BLANC.

LE FAYET-ST. GERVAIS LES BAINS

BUFFET DE LA GARE.

Le Fayet is the Terminal Station of the lines from Bellegarde and Geneva, where all passengers must change carriages for the Electric line to Chamonix. The station at le Fayet is classed as "Gare d'arrêt facultatif," i.e. passengers can stop there at their pleasure.

Meals and Refreshments at all hours, à la carte, and à prix fixe.

F. MOUTHON, Concessionnaire.

Alt. 7195 feet. **CANTON VALAIS.** **Alt. 2193 mètres.**

HOTEL JUNGFRAU

ON THE EGGISHORN,

IN A SUNNY AND SHELTERED SITUATION,

With a MAGNIFICENT VIEW over the PENNINE ALPS.

MODERATE CHARGES * PENSION * ENGLISH CHURCH.

120 BEDS

Two and a half hours by mule-path from **Fiesch**, one and a half hours from the **Summit of the Eggishorn**, and near the **Marjalen Lake.** A good path leads in 3 hours to the **Riederalp**, and in 5 hours the **Concordia Cabane** can be reached, the starting-point for the **Jungfrau, Finsteraarhorn, Monch, Monchjoch, Oberaarjoch, Jungfraujoch, Agassizjoch, etc. etc.**

"The favourite head-quarters of mountaineers on the south side of the Oberland Alps."—*Ball's Alpine Guide.*

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LIFT. LIFT.

100 Well-Furnished Bedrooms, from 2.50 to 4 francs.
Attendance and Electric Light included. Central Steam Heating. Baths.
Dinner Table d'Hote 3.50, & Supper 3 francs, Wine included.
Restaurant. Pension from 7 to 10 francs, everything included.
CHS. SAILER, *Proprietor.*

(Switzerland) GLACIER DU RHONE (Switzerland)

HOTEL DU GLACIER DU RHONE.

1800 MÈTRES * 250 BEDS * ELECTRIC LIGHT.
CATHOLIC CHAPEL * ENGLISH SERVICE * STOPPING-PLACE
FOR DILIGENCES OVER THE FURKA, THE GRIMSEL,
AND TO BRIGUE, BOTH DAY AND NIGHT.

HOTEL-PENSION BELVÉDÈRE
(FURKA ROAD)

2200 MÈTRES * 5 MINUTES FROM THE GLACIER * 90 BEDS.
FINE MOUNTAIN AIR. WALKS & EXCURSIONS. RICH ALPINE FLORA.
THE FINEST POINT OF VIEW ON THE WHOLE OF
THE ROUTE DE LA FURKA.
Will be enlarged in 1904, and provided with every modern comfort for a long stay.

POST AND TELEGRAPH OFFICES IN BOTH THESE HOTELS.
OPEN FROM 1st JUNE to 30th SEPTEMBER.

Co-Proprietor of the **JOSEPH SEILER-BRUNNER, Proprietor.**
GRAND HOTELS SEILER AT ZERMATT AND THE RIFFELALP.

GENEVA * 31 Quai des Bergues * GENEVA.

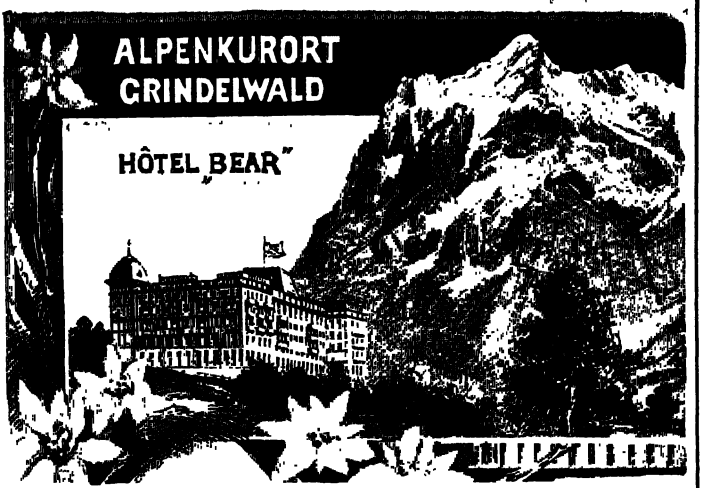
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(Late GOLAY-LERESCHE & SONS). Established 1837.

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*** DIAMONDS AND PRECIOUS STONES, ***

BRANCH HOUSE IN PARIS: 2 RUE DE LA PAIX.



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WINTER SPORTS

SKATING, TOBOGGANING, CURLING, SKIING, SNOW-SHOEING, Etc.

NEWLY RECONSTRUCTED WITH EVERY

MODERN COMFORT

OPEN THE WHOLE YEAR.

BOSS BROTHERS, Proprietors.

HOTELS & BATHING ESTABLISHMENTS COMPANY OF

LOUÈCHE-LES-BAINS

Alt. 4233 feet. **(LEUKERBAD, at the foot of the Gemmi Pass)** Alt. 1290 mètres.

Railway Station: **SOUSTE, on the Simplon Railway.**



First-Class Bathing and Alpine Station.

Pure and strengthening air. Recommended by all physicians. Eight hotels under an entirely new management. 600 beds and saloons. Electricity and all modern comforts. French cooking. Fine wines.

Large and comfortable music, reading, and billiard rooms. English newspapers taken. Library. Three closed verandas. Two concerts a day. Balls and "fêtes de nuit." The surrounding forests afford delightful promenades. Centre of numerous excursions and ascents.

Five bathing establishments supplied from more than twenty warm springs at the temperature of 51° C. Massage done on the most modern medical systems. One bathing establishment and two hotels are reserved for Tourists. Large swimming pool. The waters of Louèche have exactly the same properties as the celebrated waters of Bath (England), Louèche having the greater advantage of higher altitude and consequently purer and more invigorating air.

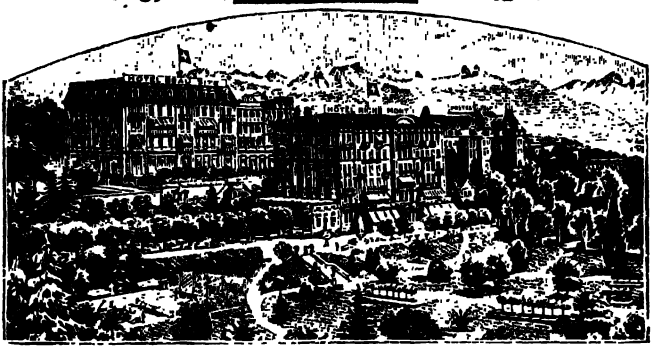
Five Physicians, a Chemist, and a Lady Doctor.

Dark room. Tennis courts, bowling alleys, and playgrounds for children. Hall fitted up for gymnastics. Milk and whey cure. Grape cure.

Season: 15th May to 1st October. Terms for Pension: Five francs a day and upward, according to location of rooms, and the Hotel.

English Church. Roman Catholic Church. * Post Office, Telegraph, and Telephone. * Mail Coach three times a day from SOUSTE to the Baths of Louèche and vice versa.

LAUSANNE



THE GRAND HOTEL

L.C. OF THE HOTELS BEAU-SITE AND RICHE-MONT, THE MODERN HOTELS OF LAUSANNE; IN THE MIDDLE OF GARDENS OF 20,000 SQ. MÈTRES; BETWEEN THE RAILWAY-STATION AND THE TOWN.

Lawn Tennis * Splendid View of the Lake and Mountains.
Central Heating * Electric Light * Lifts * Good Ventilation.
Private Bath-Rooms * Open all the Year Round.

J. A. SCHMIDT, *General Manager.*

Canton Valais. MARTIGNY. Switzerland.

GRAND HOTEL CLERC.

A FIRST-CLASS HOTEL, with a very old reputation. Enlarged, and entirely renovated inside and out, with Luxury and Modern Comfort.

GARDENS * DARK ROOM * BATHS * ELECTRIC LIGHT.
TELEPHONE & TELEGRAPH * GRAND VIEWS.

CARRIAGES FOR CHAMONIX, THE GRAND ST. BERNARD, Etc., AT THE LOWEST PRICES. * OPEN ALL THE YEAR. * PENSION.

OSCAR CORNUT-BRUNNER, *Proprietor & Director.*

MARTIGNY

GRAND HOTEL DU MONT-BLANC.

MODERN COMFORT.

Carriages and Diligences for CHAMONIX and the ST. BERNARD start from the Hotel * The Station of the Electric Railway from Martigny to Chamonix, which is to be opened in 1905, is at the side of the Hotel.

GEORGES MORAND, *Proprietor.*

ZERMATT.

BIOGRAPHICAL NOTICE OF JOHANN ZUM TAUGWALD,

WHO MADE THE FIRST ASCENTS OF MONTE ROSA, THE DOM, ETC.

By EDWARD WHYMPER. With Portrait. Price 1 fr. 25 cts.

H. KÜNDIG, CORRATERIE 11, GENEVA; M. ANDEREGG, ZERMATT.

RANDA

Near the Station on the Zermatt Railway.

Standing in its Own Garden, away from the Village.

HOTEL & PENSION WEISSHORN,

AND

HOTEL DU DOM

Close to the Station.

RANDA IS AN EXCELLENT CENTRE FOR SOME OF THE FINEST Alpine Excursions, such as the WEISSHORN, DOM, TÄSCHHORN. Magnificent View of the Breithorn. Baths in the Hotel.

R. DE WERRA, *Proprietor.*

Alt. 6316 feet. CANTON VALAIS. Alt. 1925 mètres.

HOTEL RIEDERALP

NEAR THE END OF THE GREAT ALETSCH GLACIER.

PENSION * MODERATE PRICES * ENGLISH CHURCH SERVICE.

3 hours from the EGGISHORN, 2½ hours from the BEL ALP.

"Commanding a beautiful view of Monte Leone. . . . Many charming strolls in the neighbourhood."—*Murray's Handbook to Switzerland.*

"The beautiful situation and mild climate of this Alp adapt it for a stay of some time."—*Baedeker's Switzerland.*

From the **Hotel Riederalp** the **Ascent of the Aletschhorn** can be made in **one day.**

E. CATHREIN, *Proprietor.*

The Pension Riederfurka (alt. 2100 mètres, 6890 feet) is kept by the same Proprietor.

GLION.

GRAND HOTEL RIGHI VAUDOIS.

A FIRST-CLASS HOTEL, CONSIDERABLY ENLARGED AND NEWLY FURNISHED, WITH EVERY MODERN COMFORT.

NEW DRAINAGE AND LIFT.

MOST SPLENDID SITUATION.

Moderate Prices.

Open all the year. F. RIECHELMANN, *Proprietor.*

VILLAGE OF ST. GERVAIS-LES-BAINS (Alt. 810 mètres).

SPLENDID HOTEL & DES ÉTRANGERS.

OLD-ESTABLISHED REPUTATION

LARGE TERRACES AND GARDENS.

E. BATTENDIER, Proprietor.

(Alt. 2658 ft.) SAINT GERVAIS-LES-BAINS (Alt. 810 mètres.)

HOTEL DU MONT BLANC.

With its *dependances* is the most advantageously-situated Hotel at the Village of St. Gervais-les-Bains. Post and Telegraph near the Hotel.
"Station Climatérique" recommended by all Doctors.
SEVERAL LANGUAGES SPOKEN. * A. CHAMBEL, *Proprietor.*

ST. NICOLAS (ST. NIKLAUS),
Valais, Switzerland. Alt. 1130 mètres.

GRAND HOTEL-PENSION St. NICOLAS

THIS Hotel—half way from **Visp** to **Zermatt**, near the Railway Station and outside the village—offers to Visitors a quiet, homely English Family House. Chaplain in the Hotel during the Season.

Pleasant and not difficult Excursions to the **Schwarzhorn** (Mule Path half-hour from the summit), one of the best Panoramas to be seen; to **Hannigalp**; the **Ried Glacier**; by the **Augstbord** and **Jung Passes** to **Gruben, St. Luc,** and **Zinal**; and by the **Ried Pass** to **Saas-Fée.** Excursions for good climbers—Ascents of the **Dom, Weisshorn, Brunnegghorn, Ulrichshorn, Nadelhorn, Balfrin,** etc.

Guides, Porters, Saddle-horses. Carriages for two and three persons below Railway prices. Visitors walking from **Visp** should profit by the nice drive from **St. Nicolas** to **Zermatt** through forests and meadows. This Hotel is specially suitable for staying Visitors; plenty of Walks, close to Forests, and good place for Sketching.

Meals à la carte at all hours.

LUNCH AT 12.30. DINNER AT 7. MODERATE CHARGES.

Special Arrangements for People staying, and also for Large Families and Children.

F. ZAHLER, *Proprietor.*

ST. NICOLAS (NIKLAUS),

HOTEL-PENSION LOCHMATTER.

MEALS À LA CARTE AT ALL TIMES.
Lunch, 2.50 to 3 francs. Bedrooms from 1 to 3 francs.
FAMILIES OR SINCLE PERSONS RECEIVED EN PENSION ON VERY MODERATE TERMS.
ALEXANDER LOCHMATTER, Proprietor.

CHAMONIX.

BIOGRAPHICAL NOTICE OF JEAN PAYOT,

THE OLDEST GUIDE OF CHAMONIX.
By EDWARD WHYMPER. With Portrait. Price 1 fr. 25 cts.
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Canton Valais—**SIERRE**—Switzerland.

HOTEL-PENSION CHATEAU BELLEVUE.

FAVOURITE WINTER RESORT

for persons requiring dry air and sunshine, for which the climate is renowned. Lately enlarged and fitted with every modern comfort. Handsome Dining Room, Billiard, Reading, and Smoking Rooms; large glazed Verandah full south. Heated throughout. Excellent Cooking and Abundant Table, Good Wines, etc. Double Tennis Court. New English Church adjoining the Hotel—Services all the year.

TROUT-FISHING, SKATING AND TOBOGGANING NEAR THE HOTEL.

Dark Room for Photographers. English Sanitary Arrangements. Near Railway Station. Post and Telegraph. Terms from 7 to 12 francs a day. Carriages to be had of any description.

M. ZUFFERY, *Proprietor.*

Alt. 4777 feet. **TAESCH.** Alt. 1456 mètres.

HOTEL DU TAESCHHORN

IS CLOSE TO THE RAILWAY STATION,

IN A HEALTHY SITUATION, COMMANDING SPLENDID VIEWS OF

THE BREITHORN AND PETIT MONT CERVIN,

AND IS THE BEST STARTING-POINT FOR THE TAESCHALP, WHICH IS SURROUNDED BY SOME OF THE GRANDEST PEAKS IN THE ALPS.

RUSTIC WALKS CAN BE TAKEN ALL AROUND IN THE MAGNIFICENT FORESTS.
GRAND CORGE BEHIND THE VILLAGE. * PATHS TO THE WEISSHORN CABANE, ETC.
PUREST SPRING WATER. * LARGE SALLE-A-MANGER. * 46 FINE BEDROOMS.

Alt. 4249 feet. **TRIENT.** Alt. 1295 mètres.

On the Road from Chamonix to Martigny.

GRAND HOTEL

A FIRST-CLASS HOUSE, SITUATED HALF-WAY BETWEEN CHAMONIX AND MARTIGNY * MODERATE PRICES.

PENSION CAN BE ARRANGED.

NUMEROUS EXCURSIONS * CARRIAGES AND MULES.
BATHS IN THE HOUSE * BILLIARDS * GARDEN * ELECTRIC LIGHT.

Post and Telegraph. GAY & FRASSERAN, *Proprietors.*

GORGE DU TRIFT.

FIVE MINUTES FROM ZERMATT, NEAR THE PARISH CHURCH.

FINE WATERFALLS. * ELECTRIC LIGHTS
EVERY EVENING. * MEALS & LODGING.
EXCELLENT ROOMS—COMFORTABLE—SAFE.

JOHANN WELSCHEN, *Proprietor.*

VEVEY (Lake of Geneva).

HOTEL DES TROIS COURONNES

(HOTEL MONNET)

HEALTHIEST AND FINEST LOCATION * GREAT COMFORT.
MODERATE TERMS * LARGE SHADY TERRACE ON THE LAKE.
LIFT * ELECTRIC LIGHTING THROUGHOUT.
CENTRAL HEATING.

Concerts. Open all the Year Round.

COOK'S TICKETS ACCEPTED.

ALEXR. HIRSCHI, *Manager.*

VIÈGE (VISP) CANTON VALAIS.

HOTEL DE LA POSTE

THE NEAREST HOTEL TO THE POST AND TELEGRAPH OFFICE * ON THE TELEPHONE * FINE GARDEN * MAGNIFICENT VIEWS OF THE ALPS FROM THE HOTEL * QUIET POSITION * OMNIBUS (FREE OF COST) MEETS ALL THE TRAINS * GOOD COOKING * BEER ON DRAUGHT * LOW PRICES & SPECIAL TERMS CAN BE ARRANGED FOR A PROLONGED STAY * CARRIAGES FOR THE SIMPLON, FURKA & GRIMSEL PASSES * STABLING FOR CYCLISTS & AUTOMOBILISTS.

FAMILLE STAMPFER, *Proprietors.*
Co-Proprietors of the Hotels at Zinal.

THE ENGLISH CENTRAL PHARMACY OF THE CANTON VALAIS.

SIERRE. * ZERMATT.

J. M. DE CHASTONAY, Chemist.

GOODS SENT BY PARCEL POST.

LADY-BARBER **ZERMATT.** HAIR-DRESSER
BY THE SIDE OF THE MONTE ROSA HOTEL.

MARIE BINER

SOAPS * TOILET REQUISITES * SCENTS
WHYMPER'S GUIDES.
PATRONISED BY MEMBERS OF THE ALPINE CLUB AND BY PERSONS OF DISTINCTION.

ZERMATT (Opposite Hotel de la Poste).

LOUIS BURGENER

FIRST-CLASS SHOEMAKER * PATRONISED BY ENGLISH.
MOUNTAIN AND ALL OTHER SORTS OF BOOTS.
*Repairs quickly executed * Every kind of Nails * Moderate prices.*

ABOUT 50 MINUTES FROM ZERMATT RAILWAY STATIONS.
1969 mètres (6460 feet) above the sea.

PENSION EDELWEISS ALTERKOPF

(the path to it starts on the West side of the Catholic Church).

Grand Views of the Matterhorn, Breithorn, Castor & Pollux, Lyskamm, Monte Rosa, Rimpfischhorn, Mischabelhörner, Zinal Rothhorn, Gornergrat Railway, and the Valley of Zermatt; surrounded with Edelweiss and all sorts of rare Alpine plants.

FINE MULE-PATH TO THE TRIFT HOTEL AND PATH TO THE HOHLICHT.
LOW PRICES FOR LONG STAY * RESTAURATION AT ALL HOURS.
PORTER MEETS ALL THE TRAINS * OPEN ON MAY 15.
JOHANN WELSCHEN, *Proprietor.*

AT HEUETEN, THREE-QUARTERS OF AN HOUR FROM ZERMATT.

1769 MÈTRES. **WALDESRUHE** 5804 FEET.

ON A BEAUTIFUL, ELEVATED POSITION, COMMANDING SPLENDID VIEWS
OF THE MATTERHORN, DENT BLANCHE, OBER-GABELHORN, ROTHHORN, WEISSHORN, DOM AND TAESCHHORN, BIETSCHHORN, ALETSCHHORN & GLACIER, AND MOUNTAINS OF THE OBERLAND.

MEALS AT ALL HOURS.
PENSION AT MODERATE PRICES * REDUCTIONS MADE FOR LONG STAY.
OPEN ON MAY 15.
ELIAS LAUBER & PETER LUDWIG PERRN, Proprietors.

TWENTY-FIVE MINUTES FROM ZERMATT.

HOTEL MORGENROTH

GRAND VIEWS OVER ZERMATT AND THE MATTERHORN.

LUNCH AT ALL HOURS * LOW PRICES FOR PENSION.
PURE, CLEAR SPRING WATER * COLD & WARM BATHS.
CLOSE TO THE WOODS & CHURCH. FINE EXCURSIONS.
FRANZ BINER, Proprietor.

Very Moderate Prices. **ZERMATT.** *English spoken.*

PENSION-RESTAURANT ALPENROSE.

Just outside the Village, 15 minutes from the Railway Stations,
IN FULL VIEW OF THE MATTERHORN AND MISCHABELHÖRNER,
surrounded by trees, in an admirably quiet situation. Guides and Mules can be had. A Porter meets all the Trains. JOHANN KRONIG, Proprietor.

ZERMATT.

GRAND HOTELS VICTORIA & D'ANGLETERRE.

The nearest to the Zermatt & Gornergrat Railway Stations.

MODERN COMFORT. * ELECTRIC LIGHT. * GARDEN.
SPLENDID VIEWS OF THE
MATTERHORN, BREITHORN, AND MISCHABELHÖRNER.
NICE COOKING * EXCELLENT WINES * MODERATE PRICES.
MM. SEILER, *Proprietors.*

ZERMATT

HOTEL GORNERGRAT.

NEWLY CONSTRUCTED * COMFORTABLE * CONVENIENT.
Near the Railway Station.
PENSION * RESTAURATION at all HOURS * REASONABLE PRICES.
MUCH PATRONISED BY ENGLISH FAMILIES.
Open from May 15 to October 31. English spoken. Baths.
TELEPHONE * ELECTRIC LIGHT.

HOTEL TRIFT

IN THE GORGE OF THE TRIFT, 2200 MÈTRES ABOVE THE SEA.
Two Mule-Paths lead to the Hotel from the Railway Station.
IS ON THE ROUTE FOR THE METTELHORN, TRIFTPASS,
ROTHHORN, GABELHORN, WELLENKUPPE, ETC.
PENSION * RESTAURATION AT ALL HOURS.
Guides and Mules can be obtained.
THE HOTEL CORNERGRAT AND HOTEL TRIFT ARE KEPT BY THE SAME PROPRIETOR.
PETER AUFDENBLATTEN, *Proprietor.*

ZERMATT

HOTEL-PENSION BON REPOS.

On the right bank of the Mattervisp, across the Bridge, quietly situated, surrounded by a Garden, with Grand Views over THE VALLEY OF ZERMATT AND THE MATTERHORN. Very Moderate Prices. Lunch from 2 fr. 50 cts. Afternoon Tea. Special arrangements for Families or for prolonged stay. Guides and Porters can be supplied. MATHIAS AUFDENBLATTEN, *Proprietor.*

Avenue de la Gare. **ZERMATT.** Avenue de la Gare.

HOTEL-PENSION-RESTAURANT PERREN.

With Dependance in a Magnificent Situation close by, having a Splendid View of Mont Cervin * 40 Beds * Comfortable Rooms * Electric Light * Meals at all Hours * Beer on Draught * Vins du Pays * Attentive Service * Pension from 5 to 6 frs., or 7 to 8 in the height of the Season. * Special arrangements for a long stay. HERMANN PERREN, Guide, *Proprietor.*

ZINAL

VALLÉE D'ANNIVIERS, CANTON VALAIS.

Height above Sea, 1680 mètres (5512 feet).

HOTEL DES DIABLONS

100 BEDS.

HOTEL DURAND

100 BEDS.

HOTEL DU BESSO

30 BEDS.

Open from the 1st June to the 1st October.

"Station Climatérique."

A Centre for a variety of Excursions.

ENGLISH CHURCH SERVICE.

Special Arrangements can be made for Families.

PENSION FROM 6 TO 14 FRANCS.

THE ZINAL HOTELS COMPANY,
LÉON MORAND, *Director.*

Royal Exchange Assurance

INCORPORATED A.D. 1720

CHIEF OFFICE:

ROYAL EXCHANGE, LONDON, E.C.

Funds in Hand exceed **£5,000,000**

Claims Paid **£41,000,000**

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Insurances are granted against Loss or Damage by Fire on Property of almost every description, at Moderate Rates.

Private Insurances.—Policies issued for Two Years and upwards are allowed a Liberal Discount.

Losses occasioned by Lightning will be paid whether the Property be set on fire or not.

LIFE.

EVERY DESCRIPTION OF LIFE ASSURANCE IS TRANSACTED.

ABSOLUTE SECURITY. LARGE BONUSES. MODERATE PREMIUMS.

BURGLARY, PERSONAL ACCIDENTS AND EMPLOYERS' LIABILITY.

Insurances against Employers' Liability, Personal Accidents and Burglary are now granted. Bonuses on Accident Policies allowed to Life Policyholders and Total Abstainers.

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